



DEPARTMENT OF THE AIR FORCE
AIR FORCE CIVIL ENGINEER CENTER

MEMORANDUM FOR: U.S. Environmental Protection Agency, Region IX
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MAR 27 2018

California RWQCB, Lahontan Region
Attn: Ms. Linda Stone
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California RWQCB, Lahontan Region
Attn: Mr. Todd Battey
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FROM: AFCEC/CIBW
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SUBJECT: Concurrence Requested: Draft Technical Memorandum (TM) –2018 Basewide
Groundwater (GW) Sampling Events, Former George Air Force Base (AFB)

1. The Air Force Civil Engineer Center is submitting and requesting concurrence on the *Draft Technical Memorandum – 2018 Basewide Groundwater Sampling Events – Former George AFB*. Spring field work, detailed within the Technical Memorandum, is tentatively scheduled to begin on April 23, 2018, and is estimated to last approximately 3-4 weeks.
2. This document has also been posted on the George AFB Project Portal:
[AFCEE WERC-09 Former George Air Force Base > Shaw Records Regulators > Project Records > Shared Documents > Basewide > Groundwater Sampling > 2018.](#)
3. Thank you for your support of the former George AFB. If you have any questions or concerns, please call me at (916) 643-0830, ext. 211.


DONALD GRONSTAL
BRAC Environmental Coordinator

Attachment:
Draft TM –2018 Basewide GW Sampling Events – Former George AFB (APTIM, March 2018)

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Draft Technical Memorandum

2018 Basewide Groundwater Sampling

Former George AFB

INTRODUCTION

This Tech Memo documents the details and activities associated with the upcoming semi-annual groundwater monitoring events for 2018 (Spring and Fall) at former George Air Force Base, in Victorville California. At the time of this submittal, no start date has been set for the Fall 2018 event; however, field work for the Spring event is tentatively scheduled to begin on April 23, 2018 and will include the following activities:

- Collection of potentiometric surface measurements (including depth-to-product, if present) from all basewide groundwater monitoring and extraction wells,
- Collection of groundwater samples, from selected wells, for field and laboratory analysis.

A comprehensive list of monitoring wells proposed for sampling and analyses during 2018, is provided in Table 1 of this Tech Memo. Tables 2 and 3 present a detailed breakdown of the individual sampling events in 2018, Spring and Fall respectively. Although the specific analytical combination will vary from well to well, the full list of potential analyses include: (1) volatile organic compounds (VOCs) by EPA SW846 Method 8260b; (2) dissolved cations (Ca, Mg, Na, K) by EPA SW846 Method 6010C; (3) total dissolved solids by EPA SM 2540C; (4) chloride, nitrate, and sulfate by EPA 300; (5) alkalinity by EPA A2320B; (6) dieldrin by EPA SW846 8270D; (7) hydrogen sulfide by HACH® field screening; (8) ferrous iron by HACH® field screening; (9) alkalinity by HACH® field screening (colorimetric); and (10) carbon dioxide by HACH® field screening. Note that the proposed HACH® field screening analyses are adapted from *Standard Methods for the Examination of Water and Wastewater* (APHA, 2017). Further details on the methods and analytical suites for groundwater sampling are included in the Draft UFP QAPP (Shaw, 2012).

The overall objectives of the groundwater monitoring events are to:

- Verify compliance with the OU1 ROD (CG070)
- Verify plume stability and product distribution in support of the PSCAP (SS030 and ST067b)
- Verify compliance with the LTMP (OT069)
- Verify compliance with the LTMMP (LF014 and LF044)
- Monitor dieldrin concentrations (OT071)
- Monitor VOC concentrations (ZZ051)
- Monitor seasonal variation in groundwater elevation and flow patterns
- Monitor concentrations and areal extent of contaminants of concern (COCs)

Basewide groundwater sampling at former GAFB is generally divided into two separate events: non-OU1 sampling (Spring) and OU1 sampling (Fall); except where specified within RODs/LTMPs. As such, the 2018 groundwater sampling list includes wells associated with the following sites: OT069, SS030, ST067b, OT071, ZZ051, LF014, LF044, and CG070. Note that some of the proposed wells are used for monitoring and reporting on multiple site plumes. Therefore, the summation of well totals listed in the site sections below will not equal the cumulative basewide total listed in the final section of this Tech Memo. Detailed information on associated sites can be found in Tables 1, 2, and 3.

GROUNDWATER SAMPLING

The following sections outline both Spring and Fall 2018 sampling activities associated with each site:

OT069. Site OT069 is a chlorinated VOC groundwater plume present in the Upper Aquifer beneath the flight line area that is part of OU3. The LTMP for Site OT069 entails both semi-annual and annual (typically during Spring) sampling to monitor the chlorinated solvent plume. As outlined in Table 2 and Table 3, there are 27 wells proposed for sampling during the Spring 2018 event, and five (5) wells proposed for sampling during the Fall 2018 event. Note that 5 of the 27 Spring wells and 2 of the 5 Fall wells are not part of the Site OT069 LTMP. These non-LTMP, “shared” wells will be sampled under the SS030, ST067b, and OT071 programs (see Tables 1 through 3 for detailed site breakdown and list of analyses).

SS030. Site SS030 is a non-CERCLA petroleum site identified as the free product and dissolved-phase JP-4 plumes in Upper Aquifer groundwater beneath the flightline area of the Base. Monitoring wells associated with Site SS030 are not sampled for dissolved constituents if free product is measured while gauging the depth-to-water. As outlined in Tables 2 and 3, there are 36 wells proposed for sampling during Spring 2018, and two (2) wells proposed for sampling during Fall 2018. Note that a portion of these wells are also used to monitor sites OT069, and OU1 (see Tables 1 through 3 for detailed site breakdown and list of analyses).

ST067b. Site ST067b is a non-CERCLA petroleum site located in the southwestern portion of the Base. A free product and a dissolved-phase JP-4 plume are present in the Upper Aquifer beneath the site. Monitoring wells associated with Site ST067b are not sampled for dissolved constituents if free product is measured while gauging the depth-to-water. As outlined in Tables 2 and 3, there are 33 wells proposed for sampling during the Spring 2018 event, and 32 wells proposed for sampling during the Fall 2018 event. Note that some of these wells are shared with sites OT069 and OT071 (see Tables 1 through 3 for detailed site breakdown and list of analyses).

OT071. Site OT071 is a non-CERCLA dieldrin groundwater plume in both the Upper and Lower Aquifers and is located in the southeastern portion of the Base. As outlined in Tables 2 and 3, there are 35 wells proposed for sampling during the Spring 2018 event, and 14 wells proposed for sampling during the Fall 2018 event. Note that some of these wells are also used to monitor sites ST067b, OT069, and OU1 (see Tables 1 through 3 for detailed site breakdown and list of analyses).

ZZ051. Site ZZ051 contains petroleum COCs in groundwater and is located in the Upper Aquifer along the western portion of the Base (part of OU3). Groundwater associated with ZZ051 is currently sampled annually during the Spring event. As detailed in Table 2, four (4) wells are proposed for sampling at ZZ051 during the upcoming Spring 2018 event.

DP003. Site DP003 was a suspected acid and oil burial site located approximately 400 feet north of the northeastern end of Runway 3/21. Groundwater monitoring for this landfill is currently being performed once every 5 years, in accordance with the Landfill LTMMP. Groundwater samples will not be collected at DP003 during either of the upcoming Spring or Fall 2018 sampling events. Note that the last groundwater monitoring event was conducted in Spring 2014, and the next event will be in Spring 2019.

DP004. Site DP004 is a reported pesticide and oil burial site located about 200 feet east of the northeastern end of Runway 3/21. As with Site DP003, groundwater monitoring for this landfill is currently being performed once every 5 years, in accordance with the Landfill LTMMP. As such, groundwater samples will not be collected at DP004 during either of the upcoming Spring or Fall 2018 sampling events. Note that the last groundwater monitoring event was conducted in Spring 2014, and the next event will be in Spring 2019.

LF012. Site LF012 is an abandoned landfill, covering approximately 12 acres on the eastern side of the Base, and is part of OU3. Historically, groundwater associated with LF012 was sampled annually during the Spring event; however, per Amendment #4 to the LTMMP (CB&I, 2016), the sampling frequency has been reduced to once every 5 years. As such, groundwater samples will not be collected under LF012 during either of the upcoming Spring or Fall 2018 sampling events. The next groundwater sampling event for LF012 is scheduled for Spring 2021. Note that although Tables 1 and 2 identify NZ-108 as the well for sampling at LF012, it is a “shared well” and will be sampled under OU1 and OT071 during the Spring 2018 sampling event.

LF014. Site LF014 is a landfill, covering approximately 50 acres in the northeastern portion of the Base, and is part of OU3. Historically, groundwater associated with LF014 has been sampled annually during the Spring event; however, in an effort to justify a reduction in the sampling frequency to once every 5 years, sampling will be conducted semi-annually with an expanded analyte list for the next two events. LF014 will then undergo an evaluation, similar to the one recently completed for LF012, to show that variability in analytical results is not due to leakage from the landfill. Following completion of the evaluation, Amendment #5 to the LTMMP will be prepared. If the evaluation does not support the reduction in sampling frequency, the sampling frequency will return to annual (Spring only) rotation in 2019. As outlined in Tables 2 and 3, there are nine (9) wells proposed for sampling during the Spring 2018 event, while seven (7) wells are proposed for the Fall 2018 event. Note that a portion of these wells are also used to monitor OU1.

LF044. Site LF044 is an abandoned landfill, covering approximately 0.5 acres in the northeastern portion of the Base, and is part of OU3. Groundwater associated with LF044 is currently sampled annually during the Spring sampling event. As detailed in Tables 2 and 3, there are three (3) wells proposed for sampling during the Spring 2018 event, and two (2) wells during the Fall 2018 event. Note that all of these wells are also used to monitor OU1.

FT019. Site FT019 consists of fire-training areas located northwest of Runway 3/21 and includes two active subsites: FT019a and FT019c. Groundwater beneath FT019 is part of OU1 and is sampled under Site OU1 during the annual Fall event. As such, groundwater samples will be collected at FT019 from three wells (FT-03, FT-04, and FT-05) during the Fall 2018 sampling event (see Tables 1 and 3 for detailed site breakdown and list of analyses).

OU1 (CG070). Site CG070 is an OU1 dissolved-phase TCE groundwater plume that extends from the Upper Aquifer through the PLZ to the Lower Aquifer in the northeastern portion of the Base. Although most of the wells associated with this site are sampled annually during the Fall event to monitor the OU1 plume, some are also sampled during the Spring event to monitor non-OU1 plumes (LF014, LF044, OT069, and OT071). As outlined in Table 3, there are 73 wells proposed for sampling during Fall 2018.

Proposed Well Reductions for 2018

Basewide wells that are proposed for a reduction in sampling frequency during 2018 are detailed in Table 4; however, a brief summary of each well is also presented below:

- **EW-6 (CG070):** proposed for destruction. Well has a 70-foot long screen and is replaced by wells NZ-138 and NZ-139.
- **LW-1 (CG070):** proposed for reduction in sampling frequency to 5-year rotation. This sentinel well is presently sidegradient to the plume due to VVWRA mounding. Historically non-detect since 1999.

- **LW-3** (CG070): proposed for reduction in sampling frequency to 5-year rotation. Well is both downgradient of and screened at the same depth as LW-4. Historically non-detect since 1995.
- **MW-2** (SS030): proposed for reduction in sampling frequency to 5-year rotation. This well presently monitors the upgradient edge of the SS030 plume and is historically below MCLs.
- **MW-13** (SS030): proposed for reduction in sampling frequency to 5-year rotation. This is a PSCAP compliance well at the upgradient edge of the SS030 plume that is historically below MCLs/non-detect.
- **MW-33** (SS030): proposed for reduction in sampling frequency to 5-year rotation. This is a PSCAP compliance well that is redundant with MW-86 and MW-88.
- **MW-38** (SS030): proposed for reduction in sampling frequency to 5-year rotation. This PSCAP compliance well is a clean upgradient well located southwest of the SS030 plume.
- **MW-39** (SS030/OT069): proposed for reduction in sampling frequency to 5-year rotation. This PSCAP compliance well is a clean upgradient well located southwest of the SS030 plume.
- **MW-105** (CG070): proposed for reduction in sampling frequency to 5-year rotation. This well is far upgradient to the OU1 plume. Historical results have been below 1 µg/L since 1999.
- **MW-113** (SS030): proposed for reduction in sampling frequency to 5-year rotation. This cross gradient, PSCAP compliance well presently monitors the northwestern perimeter of the SS030 benzene plume. Historical benzene at or below 1 µg/L since 2011
- **MW-124** (ST067b/OT069/OT071): proposed removal of dieldrin from list of analytes. Dieldrin analysis is redundant with wells MW-123 and MW-146. As this well also serves as a ST067b compliance well and an OT069 LTMP performance monitoring well, the remaining analytes should remain unchanged.
- **MW-142** (ST067b/OT071): proposed reduction in sampling frequency to biennial. Concentrations of benzene at this sidegradient ST067b PSCAP compliance well are historically below 1 µg/L and no benzene has been detected since October 2013.
- **MW-149** (OT071): proposed reduction in sampling frequency to biennial. This well is potentially screened too deep and is redundant with MW-163.
- **MW-153** (ST067b/OT071): proposed reduction in sampling frequency to biennial. Concentrations of benzene at this ST067b PSCAP compliance well are historically below 1 µg/L.
- **MW-155** (ST067b/OT071): proposed removal of dieldrin from list of analytes. Dieldrin analysis is redundant with and downgradient of MW-157.
- **MW-158** (ST067b/OT071): proposed removal of dieldrin from list of analytes. Dieldrin analysis is redundant with and downgradient of MW-157.
- **NZ-03** (CG070/LF014): proposed reduction in sampling frequency for annual Fall sample (CG070) to 5-year rotation (Spring sample for LF014 to remain unchanged). This well is sidegradient to the OU1 plume and is redundant with NZ-57 (downgradient of and installed to

the same depth). Historical detections are less than 1 µg/L. Note that NZ-57 is also proposed for sample reduction. If NZ-03 is selected for reduction, then NZ-57 should remain unchanged.

- **NZ-13** (CG070/LF014): proposed reduction in sampling frequency for annual Fall sample (CG070) to 5-year rotation (Spring sample for LF014 to remain unchanged). This plume boundary/compliance boundary well is sidegradient to the OU1 plume and is downgradient/redundant with NZ-85. Historical TCE has been below MCL since 1995.
- **NZ-15** (SS030): proposed for reduction in sampling frequency to 5-year rotation. This well presently monitors the deep portion of the Upper Aquifer immediately downgradient of the LNAPL plume at ST054. Historical benzene at this well has been below the MCL since 2006.
- **NZ-33** (CG070): proposed for reduction in sampling frequency to 5-year rotation. OU1 well with historical concentrations below 1 µg/L since it was installed in 1986.
- **NZ-41** (CG070): proposed for reduction in sampling frequency to biennial. This well is sidegradient to the OU1 plume and further sidegradient to NZ-37 (but screened lower). This well is redundant with NZ-48 and has been non-detect since 2011. Note that NZ-48 is also proposed for sample reduction. If NZ-41 is selected for reduction, then NZ-48 should remain unchanged.
- **NZ-43** (CG070): proposed for reduction in sampling frequency to biennial. This well is interior to the OU1 plume, has shown a decreasing trend in concentrations, and is redundant with NZ-22.
- **NZ-48** (CG070): proposed for reduction in sampling frequency to biennial. Well is redundant and screened at the same interval as NZ-37 and NZ-41. Historically non-detect since 2011. Sampling frequency to be re-evaluated should groundwater flow direction change. Note that NZ-41 is also proposed for sample reduction. If NZ-48 is selected for reduction, then NZ-41 should remain unchanged.
- **NZ-57** (CG070): proposed reduction in sampling frequency to 5-year rotation. Upgradient and same screen interval as NZ-03. Note that NZ-03 is also proposed for sample reduction. If NZ-57 is selected for reduction, then NZ-03 should remain unchanged.
- **NZ-64** (CG070/OT071): proposed removal of dieldrin from list of analytes. This downgradient well is north of the plume and non-detect.
- **NZ-69** (CG070): proposed for reduction in sampling frequency to biennial. This well is upgradient and redundant with NZ-104 and NZ-130a due to the VVWRA mound. This well has been non-detect since 2009.
- **NZ-81** (CG070): proposed removal from sampling rotation. Consistently insufficient water for sampling.
- **NZ-89** (OT071): proposed removal of dieldrin from list of analytes.
- **NZ-91** (OT071): proposed removal of dieldrin from list of analytes.
- **NZ-101** (CG070): proposed for reduction in sampling frequency to biennial. This well is internal to the OU1 plume, has stable concentrations, and is redundant with NZ-102.

- **NZ-103** (CG070): proposed for reduction in sampling frequency to biennial. This well is internal to the OU1 plume and shows a decreasing trend in concentrations.
- **NZ-111** (CG070): proposed for reduction in sampling frequency to biennial. This well is internal to the OU1 plume and is redundant with NZ-55.
- **NZ-113** (CG070/LF044): proposed reduction in sampling frequency for annual Fall sample (CG070) to 5-year rotation. This well is downgradient to the OU1 plume. As this well also serves to monitor LF044, the Spring sampling should remain unchanged.
- **NZ-119** (ST067b/OT071): proposed removal of dieldrin from list of analytes. Dieldrin analysis for this well is redundant with MW-155. Reduction decision is tied to MW-155, which is discussed above.
- **NZ-133b** (CG070): proposed reduction in sampling frequency to 5-year rotation. Well is located on the eastern side of the VVWRA mound and has been non-detect since installation in 2009. This well is presently upgradient to the OU1 plume due to VVWRA mound.
- **NZ-140** (CG070): Proposed for destruction per recent discussions with BCT.
- **OW-1** (CG070): proposed reduction in sampling frequency to 5-year. Well is located east and downgradient from NZ-03 and NZ-58 and is historically non-detect.

CONCLUSION

In summary, a total of 218 wells are proposed for sampling during the upcoming 2018 Basewide Groundwater Monitoring Events (112 wells – Spring; 106 wells – Fall). Groundwater sample analysis will include VOCs, cations, TDS, chloride, nitrate, sulfate, alkalinity, hydrogen sulfide field test, ferrous iron field test, alkalinity field test, carbon dioxide field test, and corresponding QA samples (see Tables 1, 2, and 3 for detailed breakdown). All of the wells will be gauged for depth-to-water and/or depth-to-product (if present). Gauging and groundwater monitoring will be performed in accordance with the Draft UFP-QAPP (Shaw, 2012). Sampling results from the Spring and Fall 2018 groundwater monitoring events will be reported and analyzed in the 2018 Basewide Annual Monitoring and Operations Report for CERCLA and Non-CERCLA Sites.

References

American Public Health Association (APHA), 2017, *Standard Methods for Examination of Water and Wastewater*, APHA, American Water Works Association, Water Environment Federation, June.

CB&I Federal Services LLC, 2016, *Final Amendment 04, Long-Term Monitoring and Maintenance Plan for Operable Unit 3 Landfills DP003, DP004, LF012, LF014, and LF007, Former George Air Force Base, California*, July. Air Force Administrative Record # 538349

Shaw, 2012, *Draft Uniform Federal Policy (UFP) Quality Assurance Project Plan (QAPP) Quality Program Plan – Volume 1, Former George Air Force Base, Victorville, California*, August.

Tables

Table 1 – 2018 Groundwater Monitoring Events, Proposed Well Summary

Table 2 – 2018 Groundwater Monitoring Events, Spring Well Summary

Table 3 – 2018 Groundwater Monitoring Events, Fall Well Summary

Table 4 – 2018 Groundwater Monitoring Events, Proposed Well Reduction Summary

Figures

Figure 1 – Basewide Groundwater Monitoring, Upper Aquifer Well Locations, 2018

Figure 2 – Basewide Groundwater Monitoring, Upper Aquifer Well Locations, 2018 (Detail)

Figure 3 – Basewide Groundwater Monitoring, Lower Aquifer Well Locations, 2018

Figure 4 – Basewide Groundwater Monitoring, Upper Aquifer Well Locations, Spring 2018

Figure 5 – Basewide Groundwater Monitoring, Upper Aquifer Well Locations, Spring 2018 (Detail)

Figure 6 – Basewide Groundwater Monitoring, Lower Aquifer Well Locations, Spring 2018

Figure 7 – Basewide Groundwater Monitoring, Upper Aquifer Well Locations, Fall 2018

Figure 8 – Basewide Groundwater Monitoring, Upper Aquifer Well Locations, Fall 2018 (Detail)

Figure 9 – Basewide Groundwater Monitoring, Lower Aquifer Well Locations, Fall 2018

Table 1

2018 Groundwater Monitoring Events
Proposed Well Summary
Former George Air Force Base, California
(Page 1 of 27)

Well ID	Associated Site											Aquifer	Proposed 2018		Sampled 2017		Free Product 2017		Proposed Reduction 2018	
	OU 1	FT019	ZZ051	OT069	LF007	LF012	LF014	LF044	ST067b	OT071	SS030		Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
Adelanto-04										•		NA	•							
BZ-01	•											U								
EW-1	•											U								
EW-2	•											U								
EW-3	•											U								
EW-4	•											U								
EW-5	•											U								
EW-6	•											L				•				•
EW-7	•											L								
EW-8	•											L								
EW-9	•											U								
EW-10	•											U								
EW-11	•											U								
EW-12	•											U								
EW-13	•											U								
EW-14	•											L								
EW-15	•											FPA								
EW-16	•											L								
EW-17	•											L								
EX-1											•	U					•			
EX-2											•	U								
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EX-4											•	U								
EX-5											•	U					•	•		
EX-6											•	U					•	•		
EX-7											•	U					•	•		
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EX-13											•	U					•	•		
FT-01	•	•										U								
FT-02	•	•										U								
FT-03	•	•										U		•		•				
FT-04	•	•										U		•		•				
FT-05	•	•										U		•		•				
LW-01	•											L				•				•
LW-02	•											L								
LW-03	•											L								•

Table 1

2018 Groundwater Monitoring Events
Proposed Well Summary
Former George Air Force Base, California
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Well ID	Associated Site											Aquifer	Proposed 2018		Sampled 2017		Free Product 2017		Proposed Reduction 2018	
	OU 1	FT019	ZZ051	OT069	LF007	LF012	LF014	LF044	ST067b	OT071	SS030		Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
LW-04	•											FPA		•		•				
MW-001-OU2											•	U						•		
MW-001-OU3			•									U	•		•					
MW-002											•	U							•	
MW-003											•	U						•		
MW-004											•	U	•				•	•		
MW-005											•	U					•	•		
MW-006											•	U					•			
MW-007											•	U								
MW-008											•	U								
MW-009											•	U								
MW-01-BIOMASS	•																			
MW-010											•	U					•	•		
MW-011											•	U								
MW-012											•	U					•			
MW-013											•	U							•	
MW-014											•	U						•		
MW-015											•	U								
MW-016				•							•	U	•		•					
MW-017											•	U								
MW-018											•	U					•	•		
MW-019											•	U								
MW-02-BIOMASS	•																			
MW-020											•	U								
MW-021											•	U	•		•					
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MW-024											•	U								
MW-025											•	U					•	•		
MW-026											•	U	•		•					
MW-027											•	U						•		
MW-028				•							•	U	•		•					
MW-029											•	U	•		•					
MW-03-BIOMASS	•																			
MW-030				•							•	U	•		•					
MW-031				•							•	U	•		•					
MW-032											•	U					•	•		
MW-033											•	U							•	
MW-034				•							•	U	•		•					
MW-035				•							•	U	•		•					

Table 1

2018 Groundwater Monitoring Events
Proposed Well Summary
Former George Air Force Base, California
(Page 3 of 27)

Well ID	Associated Site											Aquifer	Proposed 2018		Sampled 2017		Free Product 2017		Proposed Reduction 2018	
	OU 1	FT019	ZZ051	OT069	LF007	LF012	LF014	LF044	ST067b	OT071	SS030		Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
MW-036				•							•	U	•		•			•		
MW-037	•										•	L		•		•				
MW-038											•	U							•	
MW-039											•	U							•	
MW-040											•	U	•		•					
MW-042											•	U	•		•					
MW-043				•							•	U	•		•					
MW-044				•							•	U	•		•					
MW-045				•							•	U	•		•					
MW-046											•	U	•		•					
MW-047				•							•	U	•		•					
MW-048				•								U	•		•					
MW-049				•								U								
MW-050											•	U					•	•		
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MW-071				•							•	U	•		•					
MW-074				•								U	•		•					
MW-075				•								U	•		•					
MW-08-BIOMASS	•											I								
MW-086											•	U	•		•					
MW-087											•	U								
MW-088				•							•	U	•		•					
MW-089											•	U								
MW-090											•	U								

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Well ID	Associated Site											Aquifer	Proposed 2018		Sampled 2017		Free Product 2017		Proposed Reduction 2018	
	OU 1	FT019	ZZ051	OT069	LF007	LF012	LF014	LF044	ST067b	OT071	SS030		Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
MW-091				•							•	U	•		•					
MW-092											•	U								
MW-093											•	U								
MW-098											•	U								
MW-099											•	U	•		•					
MW-100											•	U								
MW-101-OU2											•	U						•		
MW-102-OU1	•											U/MLU		•		•				
MW-102-OU2											•	U				•				
MW-103-OU1	•											U		•		•				
MW-103-OU2											•	U					•	•		
MW-104-OU1	•											U								
MW-104-OU2											•	U					•	•		
MW-105	•											U				•				•
MW-106	•											U								
MW-107	•											L								
MW-108	•											L								
MW-109											•	U	•		•					
MW-110											•	U	•		•					
MW-111											•	U	•		•					
MW-112											•	U	•		•					
MW-113											•	U							•	
MW-114											•	U	•		•					
MW-115											•	U	•		•					
MW-116A									•			U								
MW-116B									•			U	•	•			•	•		
MW-117									•			U	•	•			•	•		
MW-118									•			U	•	•			•	•		
MW-119									•			U	•	•			•	•		
MW-120									•			U	•	•			•	•		
MW-121									•			U	•	•	•	•				
MW-123									•	•		U	•	•	•	•				
MW-124				•					•	•		U	•	•	•	•			•	
MW-125									•			U	•	•	•	•				
MW-126									•			U	•	•			•	•		
MW-127									•			U	•	•			•	•		
MW-128									•			U	•	•			•	•		
MW-129									•			U	•	•	•	•				
MW-130									•			U	•	•	•	•				
MW-131									•			U	•	•	•	•				

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2018 Groundwater Monitoring Events
Proposed Well Summary
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Well ID	Associated Site											Aquifer	Proposed 2018		Sampled 2017		Free Product 2017		Proposed Reduction 2018	
	OU 1	FT019	ZZ051	OT069	LF007	LF012	LF014	LF044	ST067b	OT071	SS030		Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
MW-132									•	•		U	•	•	•	•				
MW-133				•					•	•		U	•	•	•	•				
MW-134									•			U	•	•	•	•				
MW-135									•			U								
MW-136									•	•		U	•	•	•	•				
MW-137									•	•		U	•	•	•	•				
MW-138				•					•			U	•	•	•	•				
MW-139									•			U	•	•			•	•		
MW-140									•			U	•	•			•	•		
MW-141	•			•							•	U	•		•					
MW-142									•	•		L				•				•
MW-143									•	•		L	•	•	•	•				
MW-144									•	•		U	•		•					
MW-145				•						•		L	•		•					
MW-146				•						•		U	•		•					
MW-147										•		L	•		•					
MW-148										•		L	•							
MW-149										•		L							•	
MW-150									•	•		U	•	•	•	•				
MW-151									•	•		L	•	•	•	•				
MW-152										•		L	•		•					
MW-153									•	•		U				•				•
MW-154									•	•		U/MLU	•	•	•	•				
MW-155									•	•		U/MLU	•	•	•	•			•	
MW-157									•	•		U/MLU	•	•	•	•				
MW-158									•	•		U	•	•	•	•			•	
MW-159										•		U	•		•					
MW-160										•		U	•		•					
MW-161										•		L	•		•					
MW-162										•		L	•		•					
MW-163										•		L	•		•					
NW-01	•											L								
NW-02	•											L								
NW-03	•											L								
NZ-002	•											L								
NZ-003	•							•				L	•		•	•				•
NZ-006	•											U/MLU		•		•				
NZ-007	•											U		•		•				
NZ-010	•											U								
NZ-011	•											U		•		•				

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Well ID	Associated Site											Aquifer	Proposed 2018		Sampled 2017		Free Product 2017		Proposed Reduction 2018	
	OU 1	FT019	ZZ051	OT069	LF007	LF012	LF014	LF044	ST067b	OT071	SS030		Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
NZ-012	•											U		•		•				
NZ-013	•						•					L	•		•	•				•
NZ-014											•	U							•	
NZ-015											•	U								
NZ-016											•	U								
NZ-017	•											U								
NZ-018	•											U		•		•				
NZ-020	•											U/MLU		•		•				
NZ-021	•											U		•		•				
NZ-022	•											U/MLU		•		•				
NZ-023	•											U		•		•				
NZ-024	•											U		•		•				
NZ-025	•											U		•		•				
NZ-027	•											U/MLU		•		•				
NZ-028A	•											U		•		•				
NZ-029	•											L								
NZ-030	•											U/MLU		•		•				
NZ-031	•											U/MLU		•		•				
NZ-032	•											U/MLU		•		•				
NZ-033	•											U								•
NZ-034	•											U		•		•				
NZ-035	•											U		•		•				
NZ-036	•											U		•		•				
NZ-037	•											L		•		•				
NZ-039	•											U		•		•				
NZ-040	•											U								
NZ-041	•											L				•				•
NZ-042	•											U								
NZ-043	•											U				•				•
NZ-044	•											L		•		•				
NZ-046	•											U								
NZ-048	•											L								•
NZ-049	•											U/MLU		•		•				
NZ-050	•											L		•		•				
NZ-051	•											U		•		•				
NZ-052	•											U		•		•				
NZ-054	•											U		•		•				
NZ-055	•											U		•		•				
NZ-056	•											U		•		•				
NZ-057	•											L								•

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2018 Groundwater Monitoring Events
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Well ID	Associated Site											Aquifer	Proposed 2018		Sampled 2017		Free Product 2017		Proposed Reduction 2018	
	OU 1	FT019	ZZ051	OT069	LF007	LF012	LF014	LF044	ST067b	OT071	SS030		Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
NZ-058	•						•					L	•	•	•	•				
NZ-059	•											U								
NZ-060	•											L								
NZ-061	•											L								
NZ-062	•											L								
NZ-063	•											U	•		•					
NZ-064	•											L	•		•				•	
NZ-065	•											L	•		•					
NZ-066	•											U	•		•					
NZ-067	•											U		•		•				
NZ-068	•											U		•		•				
NZ-069	•											L				•				•
NZ-070	•											L								
NZ-071	•											L								
NZ-072	•											L		•		•				
NZ-073	•											L								
NZ-074	•											L								
NZ-076	•											L		•		•				
NZ-077	•											FPA		•		•				
NZ-078	•											L								
NZ-080	•							•				L	•	•	•	•				
NZ-081	•											U								•
NZ-082	•											U		•		•				
NZ-083	•											U		•		•				
NZ-084	•											L		•		•				
NZ-085	•						•					L	•	•		•				
NZ-086	•											L								
NZ-089										•		U	•		•				•	
NZ-091										•		U	•		•				•	
NZ-093	•											U/MLU		•		•				
NZ-094	•											U								
NZ-095	•											U								
NZ-096	•											U								
NZ-097	•											U/MLU		•		•				
NZ-098	•											L		•		•				
NZ-099	•											U/MLU		•		•				
NZ-100	•											L		•		•				
NZ-101	•											U				•				•
NZ-102	•											U		•		•				
NZ-103	•											U				•				•

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2018 Groundwater Monitoring Events
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Well ID	Associated Site											Aquifer	Proposed 2018		Sampled 2017		Free Product 2017		Proposed Reduction 2018	
	OU 1	FT019	ZZ051	OT069	LF007	LF012	LF014	LF044	ST067b	OT071	SS030		Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
NZ-104	•											L		•		•				
NZ-105	•											L								
NZ-105R	•											L		•		•				
NZ-106	•											L		•		•				
NZ-107	•						•					L	•	•	•	•				
NZ-108	•					•				•		L	•		•					
NZ-109	•											U								
NZ-110	•											U								
NZ-111	•											U				•				•
NZ-112	•							•				L	•	•	•	•				•
NZ-113	•							•				L	•		•	•				•
NZ-114	•											L								
NZ-116	•											U		•		•				
NZ-119									•	•		U	•	•	•	•			•	
NZ-120										•		U	•		•					
NZ-121										•		U	•		•					
NZ-122										•		U	•		•					
NZ-123										•		U	•		•					
NZ-124										•		U	•		•					
NZ-125										•		U	•		•					
NZ-126	•											U		•		•				
NZ-127B	•						•					L	•	•		•				
NZ-127C	•						•					L	•	•		•				
NZ-128B	•						•					L	•	•		•				
NZ-128C	•						•					L	•	•		•				
NZ-129B	•											L		•		•				
NZ-129C	•											L		•		•				
NZ-130A	•											L		•		•				
NZ-130B	•											L								
NZ-130C	•											L								
NZ-131A	•											L								
NZ-131B	•											L								
NZ-131C	•											L								
NZ-132B	•											FPA								
NZ-132C	•											FPA								
NZ-133B	•											FPA								•
NZ-133C	•											FPA								
NZ-134B	•											FPA								
NZ-134C	•											FPA								
NZ-135B	•											FPA								

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2018 Groundwater Monitoring Events
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Well ID	Associated Site											Aquifer	Proposed 2018		Sampled 2017		Free Product 2017		Proposed Reduction 2018	
	OU 1	FT019	ZZ051	OT069	LF007	LF012	LF014	LF044	ST067b	OT071	SS030		Spring	Fall	Spring	Fall	Spring	Fall	Spring	Fall
NZ-135C	•											FPA								
NZ-136	•											U		•		•				
NZ-137	•											L		•		•				
NZ-138	•											L		•		•				
NZ-139	•											L		•		•				
NZ-140	•											FPA				•				•
OW-01	•											FPA								•
OW-02	•											FPA								
OW-03	•											FPA								
OW-04	•											FPA								
OW-05	•											FPA								
OW-06	•											FPA		•		•				
P-03	•											FPA								
RZ-02	•											L		•		•				
RZ-03	•											L								
RZ-04	•											L								
SMW-01											•	U								
SMW-02											•	U								
SMW-03											•	U								
SP-01	•											--								
SP-02	•											--								
SP-03	•											--								
SP-04	•											--								
SW-01B											•	U								
SZ-06					•							U								
SZ-09					•							U								
SZ-10					•							U								
SZ-15					•							U								
SZ-16					•							U								
SZ-17					•							U								
WZ-04			•									U	•		•					
WZ-05			•									U	•		•					
WZ-06			•									U	•		•					

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2018 Groundwater Monitoring Events
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Well ID	Proposed Laboratory Analysis								Proposed Field Analysis			
	8260B	Cations	TDS	Cl -	NO3	SO4	Alk	Dieldrin	H2S	Fe2 +	Alk	CO2
Adelanto-04								S				
BZ-01												
EW-1												
EW-2												
EW-3												
EW-4												
EW-5												
EW-6	F											
EW-7												
EW-8												
EW-9												
EW-10												
EW-11												
EW-12												
EW-13												
EW-14												
EW-15												
EW-16												
EW-17												
EX-1												
EX-2												
EX-3												
EX-4												
EX-5												
EX-6												
EX-7												
EX-8												
EX-9												
EX-10												
EX-11												
EX-12												
EX-13												
FT-01												
FT-02												
FT-03	F			F								
FT-04	F			F								
FT-05	F			F								
LW-01												
LW-02												
LW-03												

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**2018 Groundwater Monitoring Events
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Well ID	Proposed Laboratory Analysis								Proposed Field Analysis			
	8260B	Cations	TDS	Cl -	NO3	SO4	Alk	Dieldrin	H2S	Fe2 +	Alk	CO2
LW-04	F											
MW-001-OU2												
MW-001-OU3	S											
MW-002												
MW-003												
MW-004	S											
MW-005												
MW-006												
MW-007												
MW-008												
MW-009												
MW-01-BIOMASS												
MW-010												
MW-011												
MW-012												
MW-013												
MW-014												
MW-015												
MW-016	S											
MW-017												
MW-018												
MW-019												
MW-02-BIOMASS												
MW-020												
MW-021	S											
MW-022												
MW-023												
MW-024												
MW-025												
MW-026	S											
MW-027												
MW-028	S											
MW-029	S											
MW-03-BIOMASS												
MW-030	S											
MW-031	S											
MW-032												
MW-033												
MW-034	S											
MW-035	S											

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**2018 Groundwater Monitoring Events
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Well ID	Proposed Laboratory Analysis								Proposed Field Analysis			
	8260B	Cations	TDS	Cl -	NO3	SO4	Alk	Dieldrin	H2S	Fe2 +	Alk	CO2
MW-036	S											
MW-037	F											
MW-038												
MW-039												
MW-040	S											
MW-042	S											
MW-043	S											
MW-044	S											
MW-045	S											
MW-046	S											
MW-047	S											
MW-048	S											
MW-049												
MW-050												
MW-051												
MW-052												
MW-054												
MW-055												
MW-056												
MW-057	S/F											
MW-058	S											
MW-06-BIOMASS												
MW-061	S/F	S	S	S	S	S	S		S	S		
MW-062												
MW-063												
MW-064												
MW-065												
MW-067												
MW-069	S											
MW-07-BIOMASS												
MW-070B	S											
MW-071	S											
MW-074	S											
MW-075	S											
MW-08-BIOMASS												
MW-086	S											
MW-087												
MW-088	S											
MW-089												
MW-090												

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**2018 Groundwater Monitoring Events
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Well ID	Proposed Laboratory Analysis								Proposed Field Analysis			
	8260B	Cations	TDS	Cl -	NO3	SO4	Alk	Dieldrin	H2S	Fe2 +	Alk	CO2
MW-091	S											
MW-092												
MW-093												
MW-098												
MW-099	S											
MW-100												
MW-101-OU2												
MW-102-OU1	F											
MW-102-OU2												
MW-103-OU1	F											
MW-103-OU2												
MW-104-OU1												
MW-104-OU2												
MW-105												
MW-106												
MW-107												
MW-108												
MW-109	S											
MW-110	S											
MW-111	S											
MW-112	S											
MW-113												
MW-114	S											
MW-115	S											
MW-116A												
MW-116B	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-117	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-118	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-119	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-120	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-121	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-123	S/F	S	S	S/F	S/F	S/F	S/F	S	S/F	S/F		
MW-124	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-125	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-126	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-127	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-128	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-129	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-130	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-131	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		

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Well ID	Proposed Laboratory Analysis								Proposed Field Analysis			
	8260B	Cations	TDS	Cl -	NO3	SO4	Alk	Dieldrin	H2S	Fe2 +	Alk	CO2
MW-132	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-133	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-134	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-135												
MW-136	S/F	S/F	S/F	S/F	S/F	S/F	S/F	S	S/F	S/F		
MW-137	S/F	S/F	S/F	S/F	S/F	S/F	S/F		S/F	S/F		
MW-138	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-139	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-140	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-141	S											
MW-142												
MW-143	S/F	S	S	S/F	S/F	S/F	S/F	S	S/F	S/F		
MW-144	S	S	S	S	S	S	S	S	S	S		
MW-145	S	S	S	S	S	S	S	S	S	S		
MW-146	S	S	S	S	S	S	S	S	S	S		
MW-147	S	S	S	S	S	S	S	S	S	S		
MW-148								S				
MW-149												
MW-150	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-151	S/F			S/F	S/F	S/F	S/F	S	F	F		
MW-152								S				
MW-153												
MW-154	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-155	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-157	S/F	S	S	S/F	S/F	S/F	S/F	S	S/F	S/F		
MW-158	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-159								S				
MW-160								S				
MW-161								S				
MW-162								S				
MW-163								S				
NW-01												
NW-02												
NW-03												
NZ-002												
NZ-003	S	S	S	S	S	S			S	S	S	S
NZ-006	F											
NZ-007	F											
NZ-010												
NZ-011	F											

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Well ID	Proposed Laboratory Analysis								Proposed Field Analysis			
	8260B	Cations	TDS	Cl -	NO3	SO4	Alk	Dieldrin	H2S	Fe2 +	Alk	CO2
NZ-012	F											
NZ-013	S	S	S	S	S	S			S	S	S	S
NZ-014												
NZ-015												
NZ-016												
NZ-017												
NZ-018	F											
NZ-020	F											
NZ-021	F											
NZ-022	F											
NZ-023	F											
NZ-024	F											
NZ-025	F											
NZ-027	F											
NZ-028A	F											
NZ-029												
NZ-030	F											
NZ-031	F											
NZ-032	F											
NZ-033												
NZ-034	F											
NZ-035	F											
NZ-036	F											
NZ-037	F											
NZ-039	F											
NZ-040												
NZ-041												
NZ-042												
NZ-043												
NZ-044	F											
NZ-046												
NZ-048												
NZ-049	F											
NZ-050	F											
NZ-051	F			F	F							
NZ-052	F			F	F							
NZ-054	F											
NZ-055	F											
NZ-056	F											
NZ-057												

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**2018 Groundwater Monitoring Events
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Well ID	Proposed Laboratory Analysis								Proposed Field Analysis			
	8260B	Cations	TDS	Cl -	NO3	SO4	Alk	Dieldrin	H2S	Fe2 +	Alk	CO2
NZ-058	S/F	S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-059												
NZ-060												
NZ-061												
NZ-062												
NZ-063								S				
NZ-064												
NZ-065								S				
NZ-066								S				
NZ-067	F											
NZ-068	F			F	F							
NZ-069												
NZ-070												
NZ-071												
NZ-072	F											
NZ-073												
NZ-074												
NZ-076	F											
NZ-077	F											
NZ-078												
NZ-080	S/F		S	S	S	S						
NZ-081												
NZ-082	F											
NZ-083	F											
NZ-084	F											
NZ-085	F	S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-086												
NZ-089											S	
NZ-091												
NZ-093	F											
NZ-094												
NZ-095												
NZ-096												
NZ-097	F											
NZ-098	F											
NZ-099	F											
NZ-100	F											
NZ-101												
NZ-102	F											
NZ-103												

Table 1

**2018 Groundwater Monitoring Events
Proposed Well Summary
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Well ID	Proposed Laboratory Analysis								Proposed Field Analysis			
	8260B	Cations	TDS	Cl -	NO3	SO4	Alk	Dieldrin	H2S	Fe2 +	Alk	CO2
NZ-104	F			F	F							
NZ-105												
NZ-105R	F											
NZ-106	F											
NZ-107	S/F	S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-108	S							S				
NZ-109												
NZ-110												
NZ-111												
NZ-112	S/F		S	S/F	S/F	S					S	
NZ-113	S		S	S	S	S					S	
NZ-114												
NZ-116	F											
NZ-119	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
NZ-120								S				
NZ-121								S				
NZ-122								S				
NZ-123								S				
NZ-124								S				
NZ-125	S	S	S	S	S	S	S	S	S	S		
NZ-126	F											
NZ-127B	F	S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-127C	F	S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-128B		S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-128C		S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-129B	F	F	F	F	F	F			F	F	F	F
NZ-129C	F	F	F	F	F	F			F	F	F	F
NZ-130A	F			F	F							
NZ-130B												
NZ-130C												
NZ-131A												
NZ-131B												
NZ-131C												
NZ-132B												
NZ-132C												
NZ-133B												
NZ-133C												
NZ-134B												
NZ-134C												
NZ-135B												

Table 1

2018 Groundwater Monitoring Events
Proposed Well Summary
Former George Air Force Base, California
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Well ID	Proposed Laboratory Analysis								Proposed Field Analysis			
	8260B	Cations	TDS	Cl -	NO3	SO4	Alk	Dieldrin	H2S	Fe2 +	Alk	CO2
NZ-135C												
NZ-136	F											
NZ-137	F											
NZ-138	F											
NZ-139	F											
NZ-140												
OW-01												
OW-02												
OW-03												
OW-04												
OW-05												
OW-06	F											
P-03												
RZ-02	F											
RZ-03												
RZ-04												
SMW-01												
SMW-02												
SMW-03												
SP-01												
SP-02												
SP-03												
SP-04												
SW-01B												
SZ-06												
SZ-09												
SZ-10												
SZ-15												
SZ-16												
SZ-17												
WZ-04	S											
WZ-05	S											
WZ-06	S											

Table 1
2018 Groundwater Monitoring Events
Proposed Well Summary
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Well ID	Remarks
Adelanto-04	City supply well upgradient of the plume. Pump removed by city for repairs
BZ-01	
EW-1	
EW-2	
EW-3	
EW-4	
EW-5	
EW-6	VOCs; OU-1 well with 70 foot long screen. Replaced by NZ-138 and NZ-139. Recommend it be destroyed (migration pathway)
EW-7	
EW-8	
EW-9	
EW-10	
EW-11	
EW-12	
EW-13	
EW-14	
EW-15	
EW-16	
EW-17	
EX-1	
EX-2	
EX-3	
EX-4	
EX-5	
EX-6	
EX-7	
EX-8	
EX-9	
EX-10	
EX-11	
EX-12	
EX-13	
FT-01	
FT-02	
FT-03	
FT-04	
FT-05	
LW-01	VOCs; Sentinel well to VVWRA wells. Sidegradient to plume due to VVWRA mound. Non-Detect since 1999
LW-02	
LW-03	

Table 1
2018 Groundwater Monitoring Events
Proposed Well Summary
Former George Air Force Base, California
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Well ID	Remarks
LW-04	
MW-001-OU2	
MW-001-OU3	Monitor benzene near ZZ051
MW-002	
MW-003	
MW-004	SS030 PSCAP compliance well
MW-005	
MW-006	
MW-007	
MW-008	
MW-009	
MW-01-BIOMASS	
MW-010	
MW-011	
MW-012	
MW-013	
MW-014	
MW-015	
MW-016	OT069 LTMP five-year review well; SS030 PSCAP compliance well
MW-017	
MW-018	
MW-019	
MW-02-BIOMASS	
MW-020	
MW-021	SS030 PSCAP compliance well
MW-022	
MW-023	Temporarily removed in 2017, to return in 2018; monitor area between ST054 and ST057; downgradient of LNAPL at MW-10; Benzene below 1 µg/L since 2009
MW-024	
MW-025	
MW-026	SS030 PSCAP compliance well
MW-027	
MW-028	OT069 LTMP five-year review/trigger well; SS030 PSCAP compliance well
MW-029	SS030 PSCAP compliance well
MW-03-BIOMASS	
MW-030	OT069 LTMP annual performance monitoring well
MW-031	OT069 LTMP annual performance monitoring well
MW-032	
MW-033	
MW-034	OT069 LTMP trigger well
MW-035	OT069 LTMP five-year review/trigger well; SS030 PSCAP compliance well

Table 1
2018 Groundwater Monitoring Events
Proposed Well Summary
Former George Air Force Base, California
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Well ID	Remarks
MW-036	OT069 LTMP five-year review/trigger well; SS030 PSCAP compliance well
MW-037	
MW-038	
MW-039	
MW-040	SS030 PSCAP compliance well
MW-042	SS030 PSCAP compliance well
MW-043	OT069 LTMP trigger well; SS030 PSCAP compliance well
MW-044	OT069 LTMP well, 5-year review sampling, sampled in 2015; trigger well
MW-045	OT069 LTMP annual performance monitoring well; SS030 compliance well
MW-046	SS030 PSCAP northwest perimeter compliance well
MW-047	OT069 LTMP five-year review well; SS030 PSCAP compliance well
MW-048	OT069 LTMP annual performance monitoring well
MW-049	
MW-050	
MW-051	
MW-052	
MW-054	
MW-055	Temporarily removed in 2017, to return in 2018; Benzene historically equal to or below 1 µg/L
MW-056	
MW-057	OT069 LTMP trigger well; SS030 PSCAP compliance well
MW-058	OT069 LTMP annual performance monitoring well; SS030 compliance well
MW-06-BIOMASS	
MW-061	OT069 LTMP annual performance monitoring well; ST067b compliance well northwest and upgradient of benzene plume
MW-062	
MW-063	
MW-064	
MW-065	
MW-067	
MW-069	
MW-07-BIOMASS	
MW-070B	SS030 PSCAP compliance well
MW-071	OT069 annual performance monitoring well; SS030 compliance well
MW-074	OT069 LTMP performance monitoring well
MW-075	OT069 LTMP performance monitoring/trigger well
MW-08-BIOMASS	
MW-086	SS030 Indirect assessment of potential VOC impacts to Lower Aquifer
MW-087	
MW-088	OT069 LTMP five-year review well; SS030 PSCAP compliance well
MW-089	
MW-090	

Table 1

**2018 Groundwater Monitoring Events
Proposed Well Summary
Former George Air Force Base, California**
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Well ID	Remarks
MW-091	OT069 LTMP annual performance monitoring well
MW-092	
MW-093	
MW-098	
MW-099	SS030 in-plume well to monitor benzene concentrations near MW-45
MW-100	
MW-101-OU2	
MW-102-OU1	
MW-102-OU2	
MW-103-OU1	
MW-103-OU2	
MW-104-OU1	
MW-104-OU2	
MW-105	VOCs; Far upgradient. All results (since 1999) below 1 ug/L
MW-106	
MW-107	
MW-108	
MW-109	SS030 PSCAP northwest perimeter compliance well
MW-110	SS030 PSCAP eastern perimeter compliance well
MW-111	SS030 in-plume well to monitor benzene concentrations near MW-63
MW-112	SS030 PSCAP western perimeter compliance well
MW-113	
MW-114	SS030 PSCAP eastern perimeter compliance well
MW-115	SS030 in-plume well to monitor benzene concentrations near Site ST054
MW-116A	
MW-116B	ST067b PSCAP compliance well; free product previously detected in well
MW-117	ST067b PSCAP compliance well; free product previously detected in well
MW-118	ST067b PSCAP compliance well; free product previously detected in well
MW-119	ST067b PSCAP compliance well; free product previously detected in well
MW-120	ST067b PSCAP compliance well; free product previously detected in well
MW-121	ST067b PSCAP compliance well west and upgradient of benzene plume
MW-123	ST067b PSCAP compliance well east and downgradient of benzene plume
MW-124	ST067b PSCAP compliance well northeast and downgradient of benzene plume; OT069 LTMP annual performance monitoring well; redundant with dieldrin wells MW-146 and MW-123
MW-125	ST067b in-plume well southeast and downgradient of LNAPL source area
MW-126	ST067b PSCAP compliance well; free product previously detected in well
MW-127	ST067b PSCAP compliance well; free product previously detected in well
MW-128	ST067b PSCAP compliance well; free product previously detected in well
MW-129	ST067b in-plume well northeast and downgradient of LNAPL source area
MW-130	ST067b in-plume well east and downgradient of LNAPL source area
MW-131	ST067b PSCAP compliance well south and crossgradient of LNAPL source area

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**2018 Groundwater Monitoring Events
Proposed Well Summary
Former George Air Force Base, California**
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Well ID	Remarks
MW-132	ST067b in-plume well southeast and downgradient of LNAPL source area well
MW-133	ST067b PSCAP compliance well north and downgradient of benzene plume
MW-134	ST067b PSCAP compliance well southwest and upgradient of benzene plume
MW-135	
MW-136	ST067b PSCAP compliance well east and downgradient of benzene plume
MW-137	ST067b PSCAP in-plume well near the southeast toe of the benzene plume
MW-138	ST067b PSCAP compliance well north and crossgradient of benzene plume
MW-139	ST067b PSCAP compliance well; free product previously detected in well
MW-140	ST067b PSCAP compliance well; free product previously detected in well
MW-141	OT069 LTMP annual performance monitoring well; SS030 PSCAP downgradient compliance well
MW-142	ST067b PSCAP compliance well; benzene is historically below 1 µg/L
MW-143	ST067b Lower Aquifer well to monitor potential vertical migration of benzene plume; monitor dieldrin concentrations within Lower Aquifer in the OT071 plume.
MW-144	ST067b PSCAP compliance well. Clean well between ST067b and OT071 plumes.
MW-145	OT069 Lower Aquifer well to monitor potential vertical migration of TCE plume; monitor NW boundary of the OT071 dieldrin plume.
MW-146	OT069 LTMP annual performance monitoring well
MW-147	OT071 well to monitor dieldrin concentrations in the Lower Aquifer.
MW-148	
MW-149	
MW-150	ST067b PSCAP in-plume well to monitor benzene concentrations along the axis of the dissolved-phase plume.
MW-151	ST067b Lower Aquifer well to monitor potential vertical migration of benzene plume; monitor downgradient edge OT071 dieldrin plume
MW-152	OT071 Lower Aquifer well to monitor southeastern side (sidegradient) of dieldrin plume
MW-153	ST067b PSCAP compliance well; benzene is historically below 1 µg/L
MW-154	ST067b MLU/PLZ in-plume well to monitor benzene concentrations near the southeastern toe of the plume.
MW-155	ST067b MLU/PLZ perimeter well to monitor benzene migration near the southeastern toe of the plume.
MW-157	ST067b MLU/PLZ perimeter well to monitor benzene migration near the southeastern toe of the plume.
MW-158	ST067b PSCAP compliance well downgradient of the southeastern toe of the benzene plume.
MW-159	New well - Interior to plume. Monitors plume stability
MW-160	New well Sidegradient to plume. Monitors southern limits.
MW-161	New well - internal to the plume. Monitors plume stability
MW-162	New well - internal to the plume. Monitors plume stability
MW-163	New well - Upgradient of plume, between plume and City supply well.
NW-01	
NW-02	
NW-03	
NZ-002	
NZ-003	OU-1 well scheduled for Fall sampling per BCT Workshop held in August 2014; area representative of contaminated and uncontaminated geochemical settings
NZ-006	
NZ-007	
NZ-010	
NZ-011	

Table 1
2018 Groundwater Monitoring Events
Proposed Well Summary
Former George Air Force Base, California
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Well ID	Remarks
NZ-012	
NZ-013	LTMP annual monitoring; plume boundary/compliance boundary category; general chemistry sample to assess movement from the upper to the lower aquifer; TCE below MCL since 1995
NZ-014	
NZ-015	
NZ-016	
NZ-017	
NZ-018	
NZ-020	
NZ-021	
NZ-022	
NZ-023	
NZ-024	
NZ-025	
NZ-027	
NZ-028A	
NZ-029	
NZ-030	
NZ-031	
NZ-032	
NZ-033	VOCs; Concentrations below 1 ug/L since well installed (1986).
NZ-034	
NZ-035	
NZ-036	
NZ-037	
NZ-039	
NZ-040	
NZ-041	VOCs
NZ-042	
NZ-043	VOCs
NZ-044	
NZ-046	
NZ-048	
NZ-049	
NZ-050	
NZ-051	
NZ-052	
NZ-054	
NZ-055	
NZ-056	
NZ-057	

Table 1
2018 Groundwater Monitoring Events
Proposed Well Summary
Former George Air Force Base, California
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Well ID	Remarks
NZ-058	LTMP annual monitoring; plume boundary/compliance boundary; TCE below MCL since 1996
NZ-059	
NZ-060	
NZ-061	
NZ-062	
NZ-063	Monitors the northern side of the plume. Internal to Dieldrin plume. Monitors plume stability.
NZ-064	Downgradient ND well north of plume
NZ-065	Downgradient ND well northwest of plume
NZ-066	Internal to Dieldrin plume. Monitors plume stability
NZ-067	
NZ-068	
NZ-069	VOCs
NZ-070	
NZ-071	
NZ-072	
NZ-073	
NZ-074	
NZ-076	
NZ-077	
NZ-078	
NZ-080	LTMP monitoring for the LF, to be sampled in Fall too; transmissive zone with highest contaminant concentrations or hydraulic conductivity; GC sample to assess movement from UA to LA
NZ-081	
NZ-082	
NZ-083	
NZ-084	
NZ-085	For analyses to show elevated concentrations are not from landfill (similar to LF012 analyses)
NZ-086	
NZ-089	Internal to Dieldrin plume. Monitors plume stability
NZ-091	Internal to Dieldrin plume. Monitors plume stability Stable concentrations and less than NZ-66
NZ-093	
NZ-094	
NZ-095	
NZ-096	
NZ-097	
NZ-098	
NZ-099	
NZ-100	
NZ-101	VOCs
NZ-102	
NZ-103	VOCs

Table 1

**2018 Groundwater Monitoring Events
Proposed Well Summary
Former George Air Force Base, California**
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Well ID	Remarks
NZ-104	
NZ-105	
NZ-105R	
NZ-106	
NZ-107	LTMP monitoring for LF (Spring), to be sampled in Fall too; transmissive zone with highest contaminant concentrations or hydraulic conductivity; GC sample to assess movement from UA to LA
NZ-108	Added in Fall 2015 per a suggestion from the RWQCB consultant during a 9/22/2015 meeting on the OT071 site. Next sampling for LF012 is Spring 2021
NZ-109	
NZ-110	
NZ-111	VOCs
NZ-112	LTMP monitoring for the landfill (only applies to Spring sampling), to be sampled in Fall too; plume boundary/compliance boundary
NZ-113	LTMP monitoring for the landfill (only applies to Spring sampling), to be sampled in Fall too; plume boundary/compliance boundary
NZ-114	
NZ-116	
NZ-119	ST067b PSCAP compliance well. Far upgradient. Redundant with MW-155
NZ-120	Center of groundwater mound. Monitors upgradient (infiltration from surface)
NZ-121	Downgradient ND well east of groundwater mound
NZ-122	Internal to Dieldrin plume monitoring plume stability east of groundwater mound.
NZ-123	Upgradient well between plume and City supply well.
NZ-124	Internal to Dieldrin plume monitoring plume stability south of groundwater mound.
NZ-125	ST067b PSCAP compliance well. Internal to Dieldrin plume monitoring plume stability south of groundwater mound.
NZ-126	
NZ-127B	For analyses to show elevated concentrations are not from landfill (similar to LF012 analyses)
NZ-127C	For analyses to show elevated concentrations are not from landfill (similar to LF012 analyses)
NZ-128B	For analyses to show elevated concentrations are not from landfill (similar to LF012 analyses)
NZ-128C	For analyses to show elevated concentrations are not from landfill (similar to LF012 analyses)
NZ-129B	
NZ-129C	
NZ-130A	
NZ-130B	
NZ-130C	
NZ-131A	
NZ-131B	
NZ-131C	
NZ-132B	
NZ-132C	
NZ-133B	
NZ-133C	
NZ-134B	
NZ-134C	
NZ-135B	

Table 1
2018 Groundwater Monitoring Events
Proposed Well Summary
Former George Air Force Base, California
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Well ID	Remarks
NZ-135C	
NZ-136	
NZ-137	
NZ-138	
NZ-139	
NZ-140	Well to be destroyed
OW-01	
OW-02	
OW-03	
OW-04	
OW-05	
OW-06	
P-03	
RZ-02	
RZ-03	
RZ-04	
SMW-01	
SMW-02	
SMW-03	
SP-01	
SP-02	
SP-03	
SP-04	
SW-01B	
SZ-06	
SZ-09	
SZ-10	
SZ-15	
SZ-16	
SZ-17	
WZ-04	Monitor effectiveness of vadose zone treatment
WZ-05	Monitor effectiveness of vadose zone treatment
WZ-06	Monitor effectiveness of vadose zone treatment

NOTES:

F - Fall

FP - Flood Plain Aquifer

GEO - Geochemical parameters include chloride, nitrate, sulfate, total dissolved solids.

GEO Extra - Additional geochemical parameters needed for geochemical evaluation may include:

total alkalinity, filtered major cations (calcium, magnesium, sodium, potassium), and field measurements of sulfide and ferrous iron

L - Lower Aquifer

MCL - Maximum contaminant level, the lower of the Federal and California MCLs

California MCLs - California Department of Public Health, 2012, California Code of Regulations - Title 22

Federal MCLs - EPA, 2012, 2012 Drinking Water Standards and Health Advisories, EPA 822-S-12-001, April

µg/L - Micrograms per liter.

S - Spring

TCE - Trichloroethene.

U - Upper Aquifer

VOCs - Volatile organic compounds.

Table 2

2018 Groundwater Monitoring Events
Spring Well Summary
Former George Air Force Base, California
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Well ID	Associated Site											Screen	Aquifer	Sampled 2017		Free Product 2017	
	OU 1	FT019	ZZ051	OT069	LF007	LF012	LF014	LF044	ST067b	OT071	SS030			Spring	Fall	Spring	Fall
Adelanto-04										•		NA	NA				
MW-001-OU3			•									113-143	U	•			
MW-004											•	119-149	U			•	•
MW-016				•							•	120-160	U	•			
MW-021											•	120-160	U	•			
MW-023				•							•	120-160	U				
MW-026											•	120-160	U	•			
MW-028				•							•	120-160	U	•			
MW-029											•	120-160	U	•			
MW-030				•							•	120-160	U	•			
MW-031				•							•	120-160	U	•			
MW-034				•							•	120-160	U	•			
MW-035				•							•	115-155	U	•			
MW-036				•							•	120-160	U	•			•
MW-040											•	118.67-159	U	•			
MW-042											•	120-160	U	•			
MW-043				•							•	118-158	U	•			
MW-044				•							•	120-160	U	•			
MW-045				•							•	120-160	U	•			
MW-046											•	115-155	U	•			
MW-047				•							•	115-155	U	•			
MW-048				•								120-160	U	•			
MW-055											•	165-175	U				
MW-057				•							•	120-160	U	•	•		
MW-058				•							•	120-160	U	•			
MW-061				•					•			120-160	U	•	•		
MW-069											•	120-140	U	•			•
MW-070B											•	122-142	U	•			
MW-071				•							•	121-141	U	•			
MW-074				•								153.4-158.4	U	•			
MW-075				•								121-161	U	•			
MW-086											•	160-190	U	•			
MW-088				•							•	118-183	U	•			
MW-091				•							•	117-132	U	•			
MW-099											•	119-134	U	•			
MW-109											•	109-135	U	•			
MW-110											•	110-135	U	•			
MW-111											•	107-127	U	•			
MW-112											•	115-140	U	•			
MW-114											•	115-140	U	•			

Table 2

2018 Groundwater Monitoring Events
Spring Well Summary
Former George Air Force Base, California
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Well ID	Associated Site											Screen	Aquifer	Sampled 2017		Free Product 2017	
	OU 1	FT019	ZZ051	OT069	LF007	LF012	LF014	LF044	ST067b	OT071	SS030			Spring	Fall	Spring	Fall
MW-115									•		•	110-140	U	•			
MW-116B									•			140-160	U			•	•
MW-117									•			140-160	U			•	•
MW-118									•			140-160	U			•	•
MW-119									•			140-160	U			•	•
MW-120									•			145-165	U			•	•
MW-121									•			132-152	U	•	•		
MW-123									•	•		146-161	U	•	•		
MW-124				•					•	•		135-155	U	•	•		
MW-125									•			143.5-163.5	U	•	•		
MW-126									•			142-162	U			•	•
MW-127									•			140.5-165.5	U			•	•
MW-128									•			145-165	U			•	•
MW-129									•			142-157	U	•	•		
MW-130									•			146-161	U	•	•		
MW-131									•			157-172	U	•	•		
MW-132									•	•		154-169	U	•	•		
MW-133				•					•	•		140-155	U	•	•		
MW-134									•	•		145-160	U	•	•		
MW-136									•	•		155-170	U	•	•		
MW-137									•	•		160-185	U	•	•		
MW-138				•					•			137-152	U	•	•		
MW-139									•			148-161	U			•	•
MW-140									•			148-168	U			•	•
MW-141	•			•							•	115-135	U	•			
MW-143									•	•		280-310	L	•	•		
MW-144									•	•		143-163	U	•			
MW-145				•						•		270 - 300	L	•			
MW-146				•						•		136 - 156	U	•			
MW-147										•		310 - 340	L	•			
MW-148										•		230 - 260	L				
MW-150									•	•		155.5-175.5	U	•	•		
MW-151									•	•		275-305	L	•	•		
MW-152										•		270 - 300	L	•			
MW-154									•	•		156-176	U/MLU	•	•		
MW-155									•	•		157.5-187.5	U/MLU	•	•		
MW-157									•	•		179-189	U/MLU	•	•		
MW-158									•	•		160-180	U	•	•		
MW-159										•		85 - 105	U	•			
MW-160										•		165 - 185	U	•			

Table 2

2018 Groundwater Monitoring Events
Spring Well Summary
Former George Air Force Base, California
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Well ID	Associated Site											Screen	Aquifer	Sampled 2017		Free Product 2017	
	OU 1	FT019	ZZ051	OT069	LF007	LF012	LF014	LF044	ST067b	OT071	SS030			Spring	Fall	Spring	Fall
MW-161										•		291 - 311	L	•			
MW-162										•		280 - 300	L	•			
MW-163										•		116 - 136	L	•			
NZ-003	•						•					130-150	L	•	•		
NZ-013	•						•					155-185	L	•	•		
NZ-058	•						•					142-163	L	•	•		
NZ-063	•											131-151	U	•			
NZ-064	•											277 - 297	L	•			
NZ-065	•											268 -288	L	•			
NZ-066	•											65 - 85	U	•			
NZ-080	•							•				258-278	L	•	•		
NZ-085	•						•					190-205	L		•		
NZ-089										•		117-137	U	•			
NZ-091										•		55 - 70	U	•			
NZ-107	•						•					260-280	L	•	•		
NZ-108	•					•				•		258-278	L	•			
NZ-112	•							•				180-200	L	•	•		
NZ-113	•							•				133-153	L	•	•		
NZ-119									•	•		148-168	U	•	•		
NZ-120										•		98-118	U	•			
NZ-121										•		14 - 29	U	•			
NZ-122										•		55-75	U	•			
NZ-123										•		33 - 48	U	•			
NZ-124										•		140-156	U	•			
NZ-125										•		140 - 160	U	•			
NZ-127B	•						•					290-310	L		•		
NZ-127C	•						•					340-360	L		•		
NZ-128B	•						•					196-216	L		•		
NZ-128C	•						•					226-246	L		•		
WZ-04			•									115-135	U	•			
WZ-05			•									115-135	U	•			
WZ-06			•									113-133	U	•			

Table 2

2018 Groundwater Monitoring Events
Spring Well Summary
Former George Air Force Base, California
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Well ID	Proposed Laboratory Analysis								Proposed Field Analysis			
	8260B	Cations	TDS	Cl -	NO3	SO4	Alk	Dieldrin	H2S	Fe2 +	Alk	CO2
Adelanto-04								S				
MW-001-OU3	S											
MW-004	S											
MW-016	S											
MW-021	S											
MW-023												
MW-026	S											
MW-028	S											
MW-029	S											
MW-030	S											
MW-031	S											
MW-034	S											
MW-035	S											
MW-036	S											
MW-040	S											
MW-042	S											
MW-043	S											
MW-044	S											
MW-045	S											
MW-046	S											
MW-047	S											
MW-048	S											
MW-055												
MW-057	S/F											
MW-058	S											
MW-061	S/F	S	S	S	S	S	S		S	S		
MW-069	S											
MW-070B	S											
MW-071	S											
MW-074	S											
MW-075	S											
MW-086	S											
MW-088	S											
MW-091	S											
MW-099	S											
MW-109	S											
MW-110	S											
MW-111	S											
MW-112	S											
MW-114	S											

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2018 Groundwater Monitoring Events
Spring Well Summary
Former George Air Force Base, California
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Well ID	Proposed Laboratory Analysis								Proposed Field Analysis			
	8260B	Cations	TDS	Cl -	NO3	SO4	Alk	Dieldrin	H2S	Fe2 +	Alk	CO2
MW-115	S											
MW-116B	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-117	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-118	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-119	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-120	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-121	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-123	S/F	S	S	S/F	S/F	S/F	S/F	S	S/F	S/F		
MW-124	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-125	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-126	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-127	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-128	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-129	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-130	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-131	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-132	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-133	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-134	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-136	S/F	S/F	S/F	S/F	S/F	S/F	S/F	S	S/F	S/F		
MW-137	S/F	S/F	S/F	S/F	S/F	S/F	S/F		S/F	S/F		
MW-138	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-139	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-140	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-141	S											
MW-143	S/F	S	S	S/F	S/F	S/F	S/F	S	S/F	S/F		
MW-144	S	S	S	S	S	S	S	S	S	S		
MW-145	S	S	S	S	S	S	S	S	S	S		
MW-146	S	S	S	S	S	S	S	S	S	S		
MW-147	S	S	S	S	S	S	S	S	S	S		
MW-148								S				
MW-150	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-151	S/F			S/F	S/F	S/F	S/F	S	F	F		
MW-152								S				
MW-154	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-155	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-157	S/F	S	S	S/F	S/F	S/F	S/F	S	S/F	S/F		
MW-158	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-159								S				
MW-160								S				

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2018 Groundwater Monitoring Events
Spring Well Summary
Former George Air Force Base, California
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Well ID	Proposed Laboratory Analysis								Proposed Field Analysis			
	8260B	Cations	TDS	Cl -	NO3	SO4	Alk	Dieldrin	H2S	Fe2 +	Alk	CO2
MW-161								S				
MW-162								S				
MW-163								S				
NZ-003	S	S	S	S	S	S			S	S	S	S
NZ-013	S	S	S	S	S	S			S	S	S	S
NZ-058	S/F	S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-063								S				
NZ-064												
NZ-065								S				
NZ-066								S				
NZ-080	S/F		S	S	S	S						
NZ-085	F	S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-089											S	
NZ-091												
NZ-107	S/F	S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-108	S							S				
NZ-112	S/F		S	S/F	S/F	S					S	
NZ-113	S		S	S	S	S					S	
NZ-119	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
NZ-120								S				
NZ-121								S				
NZ-122								S				
NZ-123								S				
NZ-124								S				
NZ-125	S	S	S	S	S	S	S	S	S	S		
NZ-127B	F	S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-127C	F	S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-128B		S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-128C		S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
WZ-04	S											
WZ-05	S											
WZ-06	S											

Table 2
2018 Groundwater Monitoring Events
Spring Well Summary
Former George Air Force Base, California
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Well ID	Remarks
Adelanto-04	City supply well upgradient of the plume. Pump removed by city for repairs
MW-001-OU3	Monitor benzene near ZZ051
MW-004	SS030 PSCAP compliance well
MW-016	OT069 LTMP five-year review well; SS030 PSCAP compliance well
MW-021	SS030 PSCAP compliance well
MW-023	Temporarily removed in 2017, to return in 2018; monitor area between ST054 and ST057; downgradient of LNAPL at MW-10; Benzene below 1 µg/L since 2009
MW-026	SS030 PSCAP compliance well
MW-028	OT069 LTMP five-year review/trigger well; SS030 PSCAP compliance well
MW-029	SS030 PSCAP compliance well
MW-030	OT069 LTMP annual performance monitoring well
MW-031	OT069 LTMP annual performance monitoring well
MW-034	OT069 LTMP trigger well
MW-035	OT069 LTMP five-year review/trigger well; SS030 PSCAP compliance well
MW-036	OT069 LTMP five-year review/trigger well; SS030 PSCAP compliance well
MW-040	SS030 PSCAP compliance well
MW-042	SS030 PSCAP compliance well
MW-043	OT069 LTMP trigger well; SS030 PSCAP compliance well
MW-044	OT069 LTMP well, 5-year review sampling, sampled in 2015; trigger well
MW-045	OT069 LTMP annual performance monitoring well; SS030 compliance well
MW-046	SS030 PSCAP northwest perimeter compliance well
MW-047	OT069 LTMP five-year review well; SS030 PSCAP compliance well
MW-048	OT069 LTMP annual performance monitoring well
MW-055	Temporarily removed in 2017, to return in 2018; Benzene historically equal to or below 1 µg/L
MW-057	OT069 LTMP trigger well; SS030 PSCAP compliance well
MW-058	OT069 LTMP annual performance monitoring well; SS030 compliance well
MW-061	OT069 LTMP annual performance monitoring well; ST067b compliance well northwest and upgradient of benzene plume
MW-069	
MW-070B	SS030 PSCAP compliance well
MW-071	OT069 annual performance monitoring well; SS030 compliance well
MW-074	OT069 LTMP performance monitoring well
MW-075	OT069 LTMP performance monitoring/trigger well
MW-086	SS030 Indirect assessment of potential VOC impacts to Lower Aquifer
MW-088	OT069 LTMP five-year review well; SS030 PSCAP compliance well
MW-091	OT069 LTMP annual performance monitoring well
MW-099	SS030 in-plume well to monitor benzene concentrations near MW-45
MW-109	SS030 PSCAP northwest perimeter compliance well
MW-110	SS030 PSCAP eastern perimeter compliance well
MW-111	SS030 in-plume well to monitor benzene concentrations near MW-63
MW-112	SS030 PSCAP western perimeter compliance well
MW-114	SS030 PSCAP eastern perimeter compliance well

Table 2
2018 Groundwater Monitoring Events
Spring Well Summary
Former George Air Force Base, California
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Well ID	Remarks
MW-115	SS030 in-plume well to monitor benzene concentrations near Site ST054
MW-116B	ST067b PSCAP compliance well; free product previously detected in well
MW-117	ST067b PSCAP compliance well; free product previously detected in well
MW-118	ST067b PSCAP compliance well; free product previously detected in well
MW-119	ST067b PSCAP compliance well; free product previously detected in well
MW-120	ST067b PSCAP compliance well; free product previously detected in well
MW-121	ST067b PSCAP compliance well west and upgradient of benzene plume
MW-123	ST067b PSCAP compliance well east and downgradient of benzene plume
MW-124	ST067b PSCAP compliance well northeast and downgradient of benzene plume; redundant with dieldrin wells MW-146 and MW-123
MW-125	ST067b in-plume well southeast and downgradient of LNAPL source area
MW-126	ST067b PSCAP compliance well; free product previously detected in well
MW-127	ST067b PSCAP compliance well; free product previously detected in well
MW-128	ST067b PSCAP compliance well; free product previously detected in well
MW-129	ST067b in-plume well northeast and downgradient of LNAPL source area
MW-130	ST067b in-plume well east and downgradient of LNAPL source area
MW-131	ST067b PSCAP compliance well south and crossgradient of LNAPL source area
MW-132	ST067b in-plume well southeast and downgradient of LNAPL source area well
MW-133	ST067b PSCAP compliance well north and downgradient of benzene plume; OT069 LTMP trigger well
MW-134	ST067b PSCAP compliance well southwest and upgradient of benzene plume
MW-136	ST067b PSCAP compliance well east and downgradient of benzene plume
MW-137	ST067b PSCAP in-plume well near the southeast toe of the benzene plume
MW-138	ST067b PSCAP compliance well north and crossgradient of benzene plume
MW-139	ST067b PSCAP compliance well; free product previously detected in well
MW-140	ST067b PSCAP compliance well; free product previously detected in well
MW-141	OT069 LTMP annual performance monitoring well; SS030 PSCAP downgradient compliance well
MW-143	ST067b Lower Aquifer well to monitor potential vertical migration of benzene plume; monitor dieldrin concentrations within Lower Aquifer in the OT071 plume.
MW-144	ST067b PSCAP compliance well. Clean well between ST067b and OT071 plumes.
MW-145	OT069 Lower Aquifer well to monitor potential vertical migration of TCE plume; monitor NW boundary of the OT071 dieldrin plume.
MW-146	OT071 dieldrin plume
MW-147	OT071 well to monitor dieldrin concentrations in the Lower Aquifer.
MW-148	
MW-150	ST067b PSCAP in-plume well to monitor benzene concentrations along the axis of the dissolved-phase plume.
MW-151	ST067b Lower Aquifer well to monitor potential vertical migration of benzene plume; monitor downgradient edge OT071 dieldrin plume
MW-152	OT071 Lower Aquifer well to monitor southeastern side (sidegradient) of dieldrin plume
MW-154	ST067b MLU/PLZ in-plume well to monitor benzene concentrations near the southeastern toe of the plume.
MW-155	ST067b MLU/PLZ perimeter well to monitor benzene migration near the southeastern toe of the plume.
MW-157	ST067b MLU/PLZ perimeter well to monitor benzene migration near the southeastern toe of the plume.
MW-158	ST067b PSCAP compliance well downgradient of the southeastern toe of the benzene plume.
MW-159	New well - Interior to plume. Monitors plume stability
MW-160	New well Sidegradient to plume. Monitors southern limits.

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2018 Groundwater Monitoring Events
Spring Well Summary
Former George Air Force Base, California
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Well ID	Remarks
MW-161	New well - internal to the plume. Monitors plume stability
MW-162	New well - internal to the plume. Monitors plume stability
MW-163	New well - Upgradient of plume, between plume and City supply well.
NZ-003	OU-1 well scheduled for Fall sampling per BCT Workshop held in August 2014; area representative of contaminated and uncontaminated geochemical settings
NZ-013	LTMP annual monitoring; plume boundary/compliance boundary category; general chemistry sample to assess movement from the upper to the lower aquifer; TCE below MCL since 1995
NZ-058	LTMP annual monitoring; plume boundary/compliance boundary; TCE below MCL since 1996
NZ-063	Monitors the northern side of the plume. Internal to Dieldrin plume. Monitors plume stability.
NZ-064	Downgradient ND well north of plume
NZ-065	Downgradient ND well northwest of plume
NZ-066	Internal to Dieldrin plume. Monitors plume stability
NZ-080	LTMP monitoring for the landfill, to be sampled in Fall too; transmissive zone with highest concentrations or hydraulic conductivity; general chemistry sample to assess movement from UA to LA
NZ-085	For analyses to show elevated concentrations are not from landfill (similar to LF012 analyses)
NZ-089	Internal to Dieldrin plume. Monitors plume stability
NZ-091	Internal to Dieldrin plume. Monitors plume stability. Stable concentrations and less than NZ-66
NZ-107	LTMP monitoring for landfill (Spring), to be sampled in Fall too; transmissive zone with highest concentrations or hydraulic conductivity; general chemistry sample to assess movement from UA to LA
NZ-108	Added in Fall 2015 per a suggestion from the RWQCB consultant during a 9/22/2015 meeting on the OT071 site. Next sampling for LF012 is Spring 2021
NZ-112	LTMP monitoring for the landfill (only applies to Spring sampling), to be sampled in Fall too; plume boundary/compliance boundary
NZ-113	LTMP monitoring for the landfill (only applies to Spring sampling), to be sampled in Fall too; plume boundary/compliance boundary
NZ-119	ST067b PSCAP compliance well. Far upgradient. Redundant with MW-155
NZ-120	Center of groundwater mound. Monitors upgradient (infiltration from surface)
NZ-121	Downgradient ND well east of groundwater mound
NZ-122	Internal to Dieldrin plume monitoring plume stability east of groundwater mound.
NZ-123	Upgradient well between plume and City supply well.
NZ-124	Internal to Dieldrin plume monitoring plume stability south of groundwater mound.
NZ-125	ST067b PSCAP compliance well. Internal to Dieldrin plume monitoring plume stability south of groundwater mound.
NZ-127B	For analyses to show elevated concentrations are not from landfill (similar to LF012 analyses)
NZ-127C	For analyses to show elevated concentrations are not from landfill (similar to LF012 analyses)
NZ-128B	For analyses to show elevated concentrations are not from landfill (similar to LF012 analyses)
NZ-128C	For analyses to show elevated concentrations are not from landfill (similar to LF012 analyses)
WZ-04	Monitor effectiveness of vadose zone treatment
WZ-05	Monitor effectiveness of vadose zone treatment
WZ-06	Monitor effectiveness of vadose zone treatment

NOTES:

F - Fall

FP - Flood Plain Aquifer

GEO - Geochemical parameters include chloride, nitrate, sulfate, total dissolved solids.

GEO Extra - Additional geochemical parameters needed for geochemical evaluation may include:

total alkalinity, filtered major cations (calcium, magnesium, sodium, potassium), and field measurements of sulfide and ferrous iron

L - Lower Aquifer

MCL - Maximum contaminant level, the lower of the Federal and California MCLs

California MCLs - California Department of Public Health, 2012, California Code of Regulations - Title 22

Federal MCLs - EPA, 2012, 2012 Drinking Water Standards and Health Advisories, EPA 822-S-12-001, April

µg/L - Micrograms per liter.

S - Spring

TCE - Trichloroethene.

U - Upper Aquifer

VOCs - Volatile organic compounds.

Table 3

2018 Groundwater Monitoring Events
Fall Well Summary
Former George Air Force Base, California
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Well ID	Associated Site											Screen	Aquifer	Sampled 2017		Free Product 2017	
	OU 1	FT019	ZZ051	OT069	LF007	LF012	LF014	LF044	ST067b	OT071	SS030			Spring	Fall	Spring	Fall
FT-03	•	•										133-168	U		•		
FT-04	•	•										134-169	U		•		
FT-05	•	•										117-127	U		•		
LW-04	•											40-100	FPA		•		
MW-037	•										•	270-310	L		•		
MW-057				•							•	120-160	U	•	•		
MW-061				•					•			120-160	U	•	•		
MW-102-OU1	•											155-175	U/MLU		•		
MW-103-OU1	•											110-134	U		•		
MW-116B									•			140-160	U			•	•
MW-117									•			140-160	U			•	•
MW-118									•			140-160	U			•	•
MW-119									•			140-160	U			•	•
MW-120									•			145-165	U			•	•
MW-121									•			132-152	U	•	•		
MW-123									•	•		146-161	U	•	•		
MW-124				•					•	•		135-155	U	•	•		
MW-125									•			143.5-163.5	U	•	•		
MW-126									•			142-162	U			•	•
MW-127									•			140.5-165.5	U			•	•
MW-128									•			145-165	U			•	•
MW-129									•			142-157	U	•	•		
MW-130									•			146-161	U	•	•		
MW-131									•			157-172	U	•	•		
MW-132									•	•		154-169	U	•	•		
MW-133				•					•	•		140-155	U	•	•		
MW-134									•			145-160	U	•	•		
MW-136									•	•		155-170	U	•	•		
MW-137									•	•		160-185	U	•	•		
MW-138				•					•			137-152	U	•	•		
MW-139									•			148-161	U			•	•
MW-140									•			148-168	U			•	•
MW-143									•	•		280-310	L	•	•		
MW-150									•	•		155.5-175.5	U	•	•		
MW-151									•	•		275-305	L	•	•		
MW-154									•	•		156-176	U/MLU	•	•		
MW-155									•	•		157.5-187.5	U/MLU	•	•		
MW-157									•	•		179-189	U/MLU	•	•		
MW-158									•	•		160-180	U	•	•		
NZ-006	•											138-158	U/MLU		•		

Table 3

2018 Groundwater Monitoring Events
Fall Well Summary
Former George Air Force Base, California
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Well ID	Associated Site											Screen	Aquifer	Sampled 2017		Free Product 2017	
	OU 1	FT019	ZZ051	OT069	LF007	LF012	LF014	LF044	ST067b	OT071	SS030			Spring	Fall	Spring	Fall
NZ-007	•											100-130	U		•		
NZ-011	•											115-145	U		•		
NZ-012	•											120-150	U		•		
NZ-018	•											122-132	U		•		
NZ-020	•											151-161	U/MLU		•		
NZ-021	•											100-115	U		•		
NZ-022	•											131-141	U/MLU		•		
NZ-023	•											135-145	U		•		
NZ-024	•											130-140	U		•		
NZ-025	•											110-120	U		•		
NZ-027	•											77-87	U/MLU		•		
NZ-028A	•											57-87	U		•		
NZ-030	•											150-160	U/MLU		•		
NZ-031	•											145-155	U/MLU		•		
NZ-032	•											116-136	U/MLU		•		
NZ-034	•											92-102	U		•		
NZ-035	•											105-115	U		•		
NZ-036	•											120-130	U		•		
NZ-037	•											132-142	L		•		
NZ-039	•											116-136	U		•		
NZ-044	•											252-273	L		•		
NZ-049	•											117-137	U/MLU		•		
NZ-050	•											235-275	L		•		
NZ-051	•											131-152	U		•		
NZ-052	•											142-162	U		•		
NZ-054	•											125-145	U		•		
NZ-055	•											108-128	U		•		
NZ-056	•											111-131	U		•		
NZ-058	•						•					142-163	L	•	•		
NZ-067	•											65-86	U		•		
NZ-068	•											122-142	U		•		
NZ-072	•											200-220	L		•		
NZ-076	•											136-156	L		•		
NZ-077	•											68-88	FPA		•		
NZ-080	•							•				258-278	L	•	•		
NZ-082	•											107-122	U		•		
NZ-083	•											112-124	U		•		
NZ-084	•											241-256	L		•		
NZ-085	•						•					190-205	L		•		
NZ-093	•											115-135	U/MLU		•		

Table 3

2018 Groundwater Monitoring Events
Fall Well Summary
Former George Air Force Base, California
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Well ID	Associated Site											Screen	Aquifer	Sampled 2017		Free Product 2017	
	OU 1	FT019	ZZ051	OT069	LF007	LF012	LF014	LF044	ST067b	OT071	SS030			Spring	Fall	Spring	Fall
NZ-097	•											97-117	U/MLU		•		
NZ-098	•											226-246	L		•		
NZ-099	•											96-116	U/MLU		•		
NZ-100	•											160-180	L		•		
NZ-102	•											96-116	U		•		
NZ-104	•											117-137	L		•		
NZ-105R	•											170-190	L		•		
NZ-106	•											210-230	L		•		
NZ-107	•						•					260-280	L	•	•		
NZ-112	•							•				180-200	L	•	•		
NZ-116	•											120-140	U		•		
NZ-119									•	•		148-168	U	•	•		
NZ-126	•											115-135	U		•		
NZ-127B	•						•					290-310	L		•		
NZ-127C	•						•					340-360	L		•		
NZ-128B	•						•					196-216	L		•		
NZ-128C	•						•					226-246	L		•		
NZ-129B	•											290-310	L		•		
NZ-129C	•											320-340	L		•		
NZ-130A	•											155-175	L		•		
NZ-136	•											101.5-121.5	U		•		
NZ-137	•											208.7-228.7	L		•		
NZ-138	•											130-150	L		•		
NZ-139	•											130-150	L		•		
OW-06	•											26-34	FPA		•		
RZ-02	•											310-330	L		•		

Table 3

2018 Groundwater Monitoring Events
Fall Well Summary
Former George Air Force Base, California
(Page 4 of 9)

Well ID	Proposed Laboratory Analysis								Proposed Field Analysis			
	8260B	Cations	TDS	Cl -	NO3	SO4	Alk	Dieldrin	H2S	Fe2 +	Alk	CO2
FT-03	F			F								
FT-04	F			F								
FT-05	F			F								
LW-04	F											
MW-037	F											
MW-057	S/F											
MW-061	S/F	S	S	S	S	S	S		S	S		
MW-102-OU1	F											
MW-103-OU1	F											
MW-116B	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-117	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-118	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-119	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-120	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-121	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-123	S/F	S	S	S/F	S/F	S/F	S/F	S	S/F	S/F		
MW-124	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-125	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-126	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-127	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-128	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-129	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-130	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-131	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-132	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-133	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-134	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-136	S/F	S/F	S/F	S/F	S/F	S/F	S/F	S	S/F	S/F		
MW-137	S/F	S/F	S/F	S/F	S/F	S/F	S/F		S/F	S/F		
MW-138	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-139	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-140	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-143	S/F	S	S	S/F	S/F	S/F	S/F	S	S/F	S/F		
MW-150	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-151	S/F			S/F	S/F	S/F	S/F	S	F	F		
MW-154	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-155	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-157	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
MW-158	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
NZ-006	F											

Table 3

2018 Groundwater Monitoring Events
Fall Well Summary
Former George Air Force Base, California
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Well ID	Proposed Laboratory Analysis								Proposed Field Analysis			
	8260B	Cations	TDS	Cl -	NO3	SO4	Alk	Dieldrin	H2S	Fe2 +	Alk	CO2
NZ-007	F											
NZ-011	F											
NZ-012	F											
NZ-018	F											
NZ-020	F											
NZ-021	F											
NZ-022	F											
NZ-023	F											
NZ-024	F											
NZ-025	F											
NZ-027	F											
NZ-028A	F											
NZ-030	F											
NZ-031	F											
NZ-032	F											
NZ-034	F											
NZ-035	F											
NZ-036	F											
NZ-037	F											
NZ-039	F											
NZ-044	F											
NZ-049	F											
NZ-050	F											
NZ-051	F			F	F							
NZ-052	F			F	F							
NZ-054	F											
NZ-055	F											
NZ-056	F											
NZ-058	S/F	S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-067	F											
NZ-068	F			F	F							
NZ-072	F											
NZ-076	F											
NZ-077	F											
NZ-080	S/F		S	S	S	S						
NZ-082	F											
NZ-083	F											
NZ-084	F											
NZ-085	F	S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-093	F											

Table 3

2018 Groundwater Monitoring Events
Fall Well Summary
Former George Air Force Base, California
(Page 6 of 9)

Well ID	Proposed Laboratory Analysis								Proposed Field Analysis			
	8260B	Cations	TDS	Cl -	NO3	SO4	Alk	Dieldrin	H2S	Fe2 +	Alk	CO2
NZ-097	F											
NZ-098	F											
NZ-099	F											
NZ-100	F											
NZ-102	F											
NZ-104	F			F	F							
NZ-105R	F											
NZ-106	F											
NZ-107	S/F	S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-112	S/F		S	S/F	S/F	S					S	
NZ-116	F											
NZ-119	S/F	S	S	S/F	S/F	S/F	S/F		S/F	S/F		
NZ-126	F											
NZ-127B	F	S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-127C	F	S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-128B		S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-128C		S/F	S/F	S/F	S/F	S/F			S/F	S/F	S/F	S/F
NZ-129B	F	F	F	F	F	F			F	F	F	F
NZ-129C	F	F	F	F	F	F			F	F	F	F
NZ-130A	F			F	F							
NZ-136	F											
NZ-137	F											
NZ-138	F											
NZ-139	F											
OW-06	F											
RZ-02	F											

Table 3
2018 Groundwater Monitoring Events
Fall Well Summary
Former George Air Force Base, California
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Well ID	Remarks
FT-03	
FT-04	
FT-05	
LW-04	
MW-037	
MW-057	OT069 LTMP trigger well; SS030 PSCAP compliance well
MW-061	OT069 LTMP annual performance monitoring well; ST067b compliance well northwest and upgradient of benzene plume
MW-102-OU1	
MW-103-OU1	
MW-116B	ST067b PSCAP compliance well; free product previously detected in well
MW-117	ST067b PSCAP compliance well; free product previously detected in well
MW-118	ST067b PSCAP compliance well; free product previously detected in well
MW-119	ST067b PSCAP compliance well; free product previously detected in well
MW-120	ST067b PSCAP compliance well; free product previously detected in well
MW-121	ST067b PSCAP compliance well west and upgradient of benzene plume
MW-123	ST067b PSCAP compliance well east and downgradient of benzene plume
MW-124	ST067b PSCAP compliance well northeast and downgradient of benzene plume; redundant with dieldrin wells MW-146 and MW-123
MW-125	ST067b in-plume well southeast and downgradient of LNAPL source area
MW-126	ST067b PSCAP compliance well; free product previously detected in well
MW-127	ST067b PSCAP compliance well; free product previously detected in well
MW-128	ST067b PSCAP compliance well; free product previously detected in well
MW-129	ST067b in-plume well northeast and downgradient of LNAPL source area
MW-130	ST067b in-plume well east and downgradient of LNAPL source area
MW-131	ST067b PSCAP compliance well south and crossgradient of LNAPL source area
MW-132	ST067b in-plume well southeast and downgradient of LNAPL source area well
MW-133	ST067b PSCAP compliance well north and downgradient of benzene plume; OT069 LTMP trigger well
MW-134	ST067b PSCAP compliance well southwest and upgradient of benzene plume
MW-136	ST067b PSCAP compliance well east and downgradient of benzene plume
MW-137	ST067b PSCAP in-plume well near the southeast toe of the benzene plume
MW-138	ST067b PSCAP compliance well north and crossgradient of benzene plume
MW-139	ST067b PSCAP compliance well; free product previously detected in well
MW-140	ST067b PSCAP compliance well; free product previously detected in well
MW-143	ST067b Lower Aquifer well to monitor potential vertical migration of benzene plume; monitor dieldrin concentrations within Lower Aquifer in the OT071 plume.
MW-150	ST067b PSCAP in-plume well to monitor benzene concentrations along the axis of the dissolved-phase plume.
MW-151	ST067b Lower Aquifer well to monitor potential vertical migration of benzene plume; monitor downgradient edge OT071 dieldrin plume
MW-154	ST067b MLU/PLZ in-plume well to monitor benzene concentrations near the southeastern toe of the plume.
MW-155	ST067b MLU/PLZ perimeter well to monitor benzene migration near the southeastern toe of the plume.
MW-157	ST067b MLU/PLZ perimeter well to monitor benzene migration near the southeastern toe of the plume.
MW-158	ST067b PSCAP compliance well downgradient of the southeastern toe of the benzene plume.
NZ-006	

Table 3
2018 Groundwater Monitoring Events
Fall Well Summary
Former George Air Force Base, California
 (Page 8 of 9)

Well ID	Remarks
NZ-007	
NZ-011	
NZ-012	
NZ-018	
NZ-020	
NZ-021	
NZ-022	
NZ-023	
NZ-024	
NZ-025	
NZ-027	
NZ-028A	
NZ-030	
NZ-031	
NZ-032	
NZ-034	
NZ-035	
NZ-036	
NZ-037	
NZ-039	
NZ-044	
NZ-049	
NZ-050	
NZ-051	
NZ-052	
NZ-054	
NZ-055	
NZ-056	
NZ-058	LTMP annual monitoring; plume boundary/compliance boundary; TCE below MCL since 1996
NZ-067	
NZ-068	
NZ-072	
NZ-076	
NZ-077	
NZ-080	LTMP monitoring for the landfill, to be sampled in Fall too; transmissive zone with highest concentrations or hydraulic conductivity; general chemistry sample to assess movement from UA to LA
NZ-082	
NZ-083	
NZ-084	
NZ-085	For analyses to show elevated concentrations are not from landfill (similar to LF012 analyses)
NZ-093	

Table 3
2018 Groundwater Monitoring Events
Fall Well Summary
Former George Air Force Base, California
(Page 9 of 9)

Well ID	Remarks
NZ-097	
NZ-098	
NZ-099	
NZ-100	
NZ-102	
NZ-104	
NZ-105R	
NZ-106	
NZ-107	LTMP monitoring for landfill (Spring); to be sampled in Fall too; transmissive zone with highest concentrations or hydraulic conductivity; general chemistry sample to assess movement from UA to LA
NZ-112	LTMP monitoring for the landfill (only applies to Spring sampling), to be sampled in Fall too; plume boundary/compliance boundary
NZ-116	
NZ-119	ST067b PSCAP compliance well. Far upgradient. Redundant with MW-155
NZ-126	
NZ-127B	For analyses to show elevated concentrations are not from landfill (similar to LF012 analyses)
NZ-127C	For analyses to show elevated concentrations are not from landfill (similar to LF012 analyses)
NZ-128B	For analyses to show elevated concentrations are not from landfill (similar to LF012 analyses)
NZ-128C	For analyses to show elevated concentrations are not from landfill (similar to LF012 analyses)
NZ-129B	
NZ-129C	
NZ-130A	
NZ-136	
NZ-137	
NZ-138	
NZ-139	
OW-06	
RZ-02	

NOTES:

F - Fall

FP - Flood Plain Aquifer

GEO - Geochemical parameters include chloride, nitrate, sulfate, total dissolved solids.

GEO Extra - Additional geochemical parameters needed for geochemical evaluation may include:

total alkalinity, filtered major cations (calcium, magnesium, sodium, potassium), and field measurements of sulfide and ferrous iron

L - Lower Aquifer

MCL - Maximum contaminant level, the lower of the Federal and California MCLs

California MCLs - California Department of Public Health, 2012, California Code of Regulations - Title 22

Federal MCLs - EPA, 2012, 2012 Drinking Water Standards and Health Advisories, EPA 822-S-12-001, April

µg/L - Micrograms per liter.

S - Spring

TCE - Trichloroethene.

U - Upper Aquifer

VOCs - Volatile organic compounds.

Table 4

**2018 Groundwater Monitoring Events
Proposed Well Reduction Summary
Former George Air Force Base, California**
(Page 1 of 1)

Well ID	Sampled 2017		Proposed Reduction 2018		Proposed Change	Remarks
	Spring	Fall	Spring	Fall		
EW-6		•		•	Recommend destroy	OU-1 well with 70 foot long screen. Replaced by NZ-138 and NZ-139.
LW-01		•		•	reduce to 5-yr rotation	Sentinel well to VVWRA wells. Sidegradient to plume due to VVWRA mound. Non-Detect since 1999
LW-03				•	reduce to 5-yr rotation	Downgradient from and same depth as LW-4; ND since 1995
MW-002			•		reduce to 5-yr rotation	Monitor upgradient edge of S5030 plume; historically below MCLs
MW-013			•		reduce to 5-yr rotation	S5030 PSCAP compliance well; historically ND/below MCLs
MW-033			•		reduce to 5-yr rotation	S5030 PSCAP compliance well; redundant with MW-88 and MW-86
MW-038			•		reduce to 5-yr rotation	S5030 PSCAP compliance well; clean upgradient well
MW-039			•		reduce to 5-yr rotation	Clean well upgradient of S5030 and OT069 plumes: S5030 PSCAP compliance well
MW-105		•		•	reduce to 5-yr rotation	Far upgradient. All results (since 1999) below 1 ug/L
MW-113			•		reduce to 5-yr rotation	Monitor NW perimeter of S5030 benzene plume; cross gradient; PSCAP compliance well; bz at or below 1 µg/L since 2011
MW-124	•	•	•		Remove dieldrin	redundant with dieldrin wells MW-146 and MW-123
MW-142		•		•	Reduce to biennial; next sample Fall 2019	ST067b PSCAP compliance well; benzene is historically below 1 µg/L
MW-149			•		Reduce to biennial; next sample Fall 2019	screened too deep; redundant with MW-163
MW-153		•		•	Reduce to biennial; next sample Fall 2019	ST067b PSCAP compliance well; benzene is historically below 1 µg/L
MW-155	•	•	•		Remove dieldrin	Dieldrin analysis is redundant with and downgradient of MW-157
MW-158	•	•	•		Remove dieldrin	Dieldrin analysis is redundant with and downgradient of MW-157
NZ-003	•	•		•	Reduce Fall sample to 5-yr rotation	Sidegradient to plume. Downgradient from and at the same depth as NZ-57. All samples less than 1 ug/L
NZ-013	•	•		•	Reduce Fall sample to 5-yr rotation	Plume boundary/compliance boundary well; TCE below MCL since 1995. Sidegradient to plume. DG and redundant with NZ-8
NZ-015			•		Reduce to 5-yr rotation	Monitor deep portion of Upper Aquifer immediately DG of LNAPL plume at ST054; benzene below MCL since 2006
NZ-033		•		•	Reduce to 5-yr rotation	Concentrations below 1 ug/L since well installed (1986).
NZ-041		•		•	Reduce to biennial; next sample Fall 2019	Sidegradient to plume. Further sidegradient than NZ-37 but lower in aquifer. Samples ND since 2011. Redundant with NZ-48
NZ-043		•		•	Reduce to biennial; next sample Fall 2019	Interior to plume, decreasing concentrations. Redundant with NZ-22.
NZ-048				•	Reduce to biennial; next sample Fall 2019	Redundant and screened at same interval as NZ-37 and NZ-41. ND since 2011
NZ-057				•	Reduce to 5-yr rotation	Upgradient and same screen interval as NZ-03
NZ-064	•		•		Remove dieldrin	Downgradient ND well north of plume
NZ-069		•		•	Reduce to biennial; next sample Fall 2019	Upgradient and redundant with NZ-104 and NZ-130a due to VVWRA mound. Constrains the limits of the plume. ND since 200
NZ-081				•	Remove from rotation	Consistently insufficient water for sampling. Redundant with NZ-55
NZ-089	•		•		Remove dieldrin	Internal to Dieldrin plume. Monitors plume stability
NZ-091	•		•		Remove dieldrin	Internal to Dieldrin plume. Monitors plume stability Stable concentrations and less than NZ-66
NZ-101		•		•	Reduce to biennial; next sample Fall 2019	Interior to plume, stable concentrations. Redundant with NZ-102
NZ-103		•		•	Reduce to biennial; next sample Fall 2019	Interior to plume, decreasing concentrations
NZ-111		•		•	Reduce to biennial; next sample Fall 2019	Interior to plume near eastern edge of the aquifer. Redundant with NZ-55
NZ-113	•	•		•	Reduce Fall sample to 5-yr rotation	LTMP monitoring for the landfill (only applies to Spring sampling); DG to plume. Constrains the limits of the plume.
NZ-119	•	•	•		Remove dieldrin	ST067b PSCAP compliance well. Far upgradient. Redundant with MW-155
NZ-133B				•	Reduce to biennial; next sample Fall 2019	Well on eastern side of VVWRA mound. ND since installation in 2009. Upgradient to plume due to VVWRA mound.
NZ-140		•		•	Well to be destroyed	Downgradient from OW-06. To be destroyed per agreement with RWQCB ASAP
OW-01				•	Reduce to biennial; next sample Fall 2019	Well is located east and downgradient from NZ-03 and NZ-58 and is historically non-detect

NOTES:

F - Fall

FP - Flood Plain Aquifer

GEO - Geochemical parameters include chloride, nitrate, sulfate, total dissolved solids.

GEO Extra - Additional geochemical parameters needed for geochemical evaluation may include:

total alkalinity, filtered major cations (calcium, magnesium, sodium, potassium), and field measurements of sulfide and ferrous iron

L - Lower Aquifer

MCL - Maximum contaminant level, the lower of the Federal and California MCLs

California MCLs - California Department of Public Health, 2012, California Code of Regulations - Title 22

Federal MCLs - EPA, 2012, 2012 Drinking Water Standards and Health Advisories, EPA 822-S-12-001, April

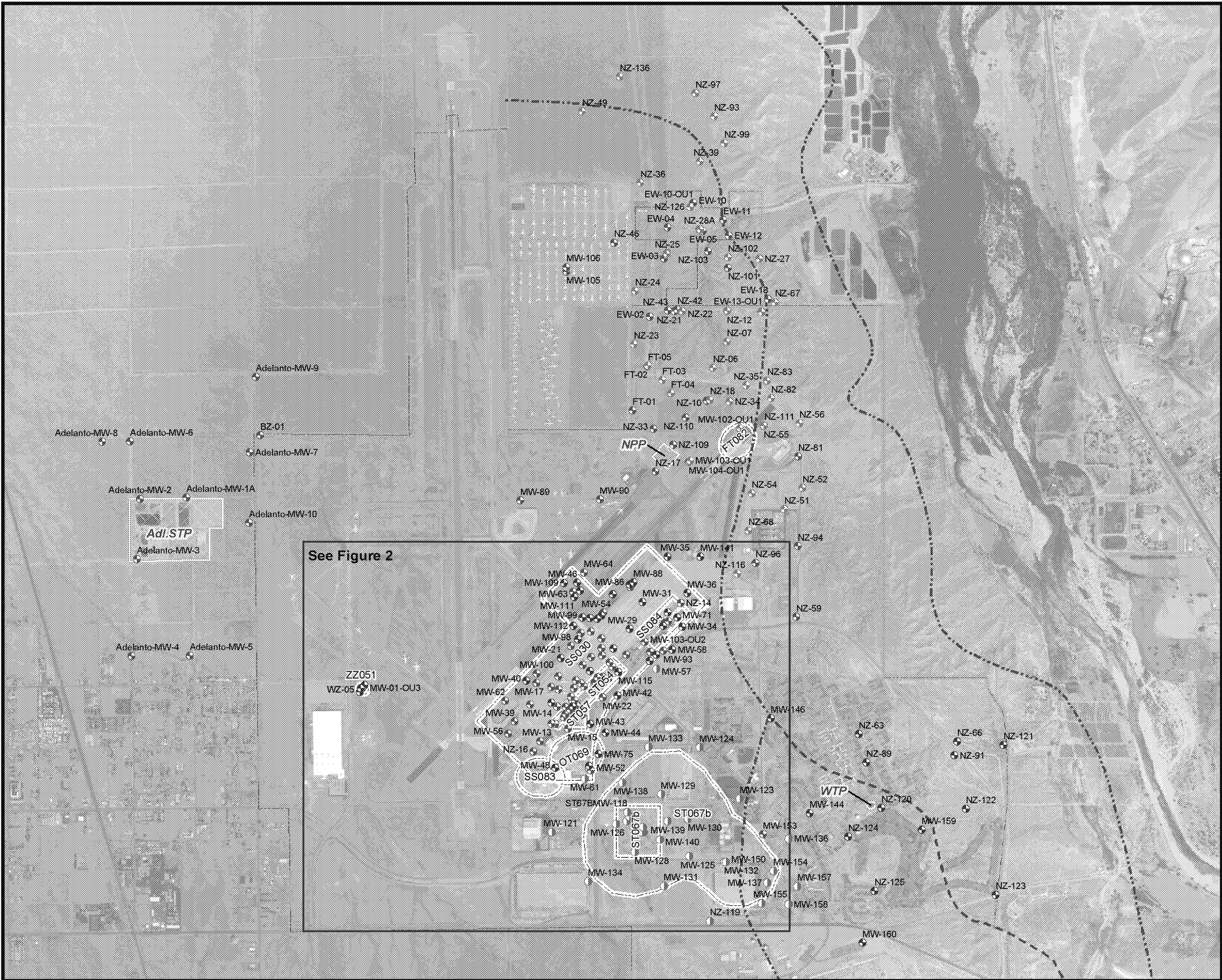
µg/L - Micrograms per liter.

S - Spring

TCE - Trichloroethene.

U - Upper Aquifer

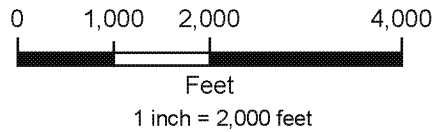
VOCs - Volatile organic compounds.



LEGEND

- Proposed Spring 2018
- Proposed Fall 2018
- Proposed Spring and Fall 2018
- Not Proposed for Sampling
- MLU/PLZ Boundary
- Modified MLU/PLZ (pre-2012)
- Site Boundary
- Enhanced Infiltration Areas
- Former George Air Force Base Boundary

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographic
CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the
User Community

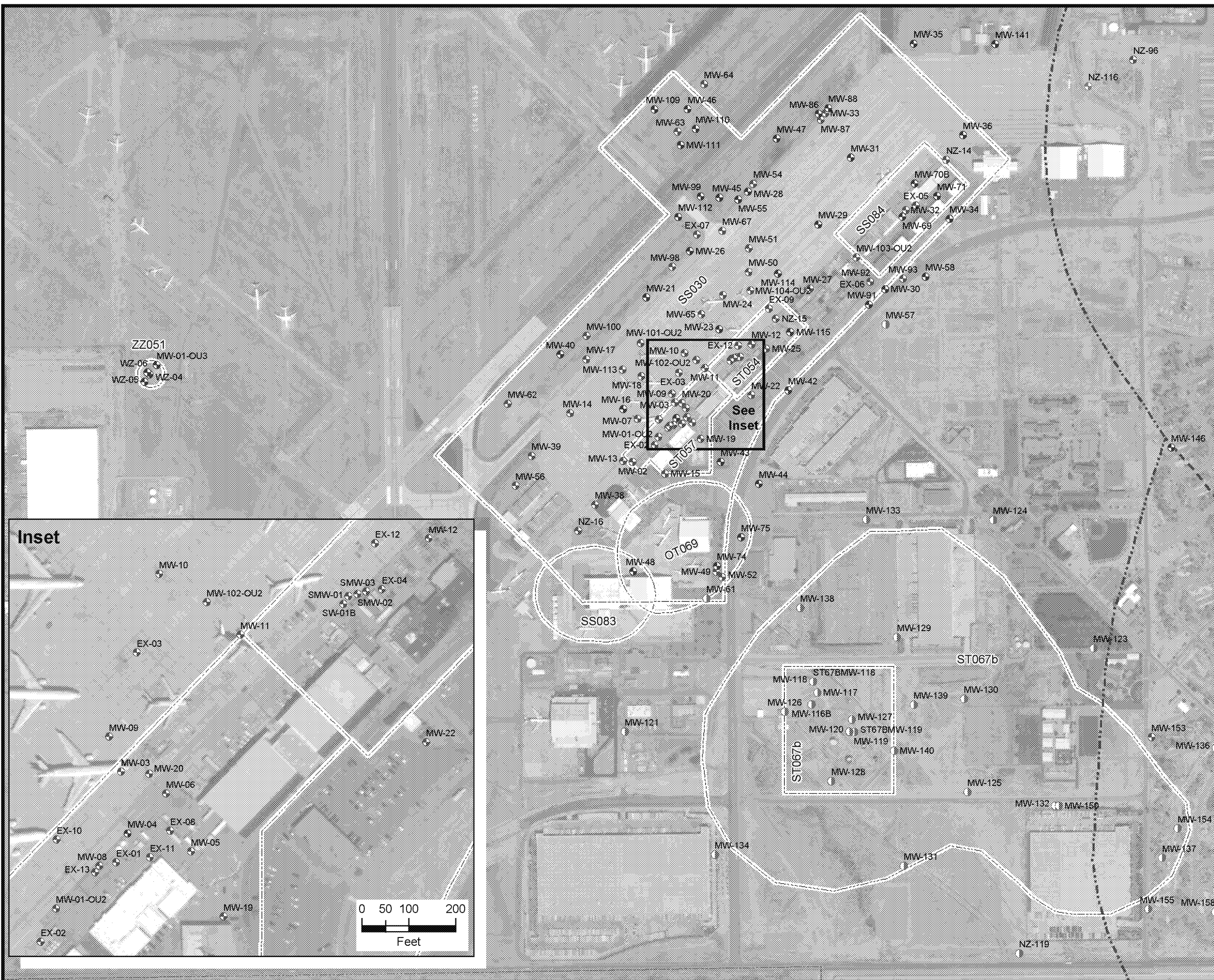


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FORMER GEORGE AIR FORCE BASE
VICTORVILLE, CALIFORNIA

FIGURE 1

BASEWIDE GROUNDWATER MONITORING
UPPER AQUIFER WELL LOCATIONS
2018

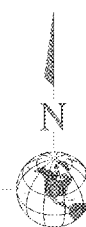


LEGEND

- Proposed Spring 2018
- Proposed Fall 2018
- Proposed Spring and Fall 2018
- Not Proposed for Sampling
- MLU/PLZ Boundary
- Modified MLU/PLZ (pre-2012)
- Site Boundary
- Enhanced Infiltration Areas
- Former George Air Force Base Boundary

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographic
CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the
User Community

0 400 800 1,600
Feet
1 inch = 800 feet



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FIGURE 2

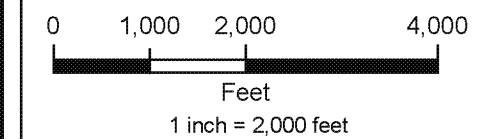
BASEWIDE GROUNDWATER MONITORING
UPPER AQUIFER WELL LOCATIONS
2018 (DETAIL)



LEGEND

- Proposed Spring 2018
- Proposed Fall 2018
- Proposed Spring and Fall 2018
- Not Proposed for Sampling
- MLU/PLZ Boundary
- Modified MLU/PLZ (pre-2012)
- Site Boundary
- Enhanced Infiltration Areas
- Former George Air Force Base Boundary

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographic
CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the
User Community

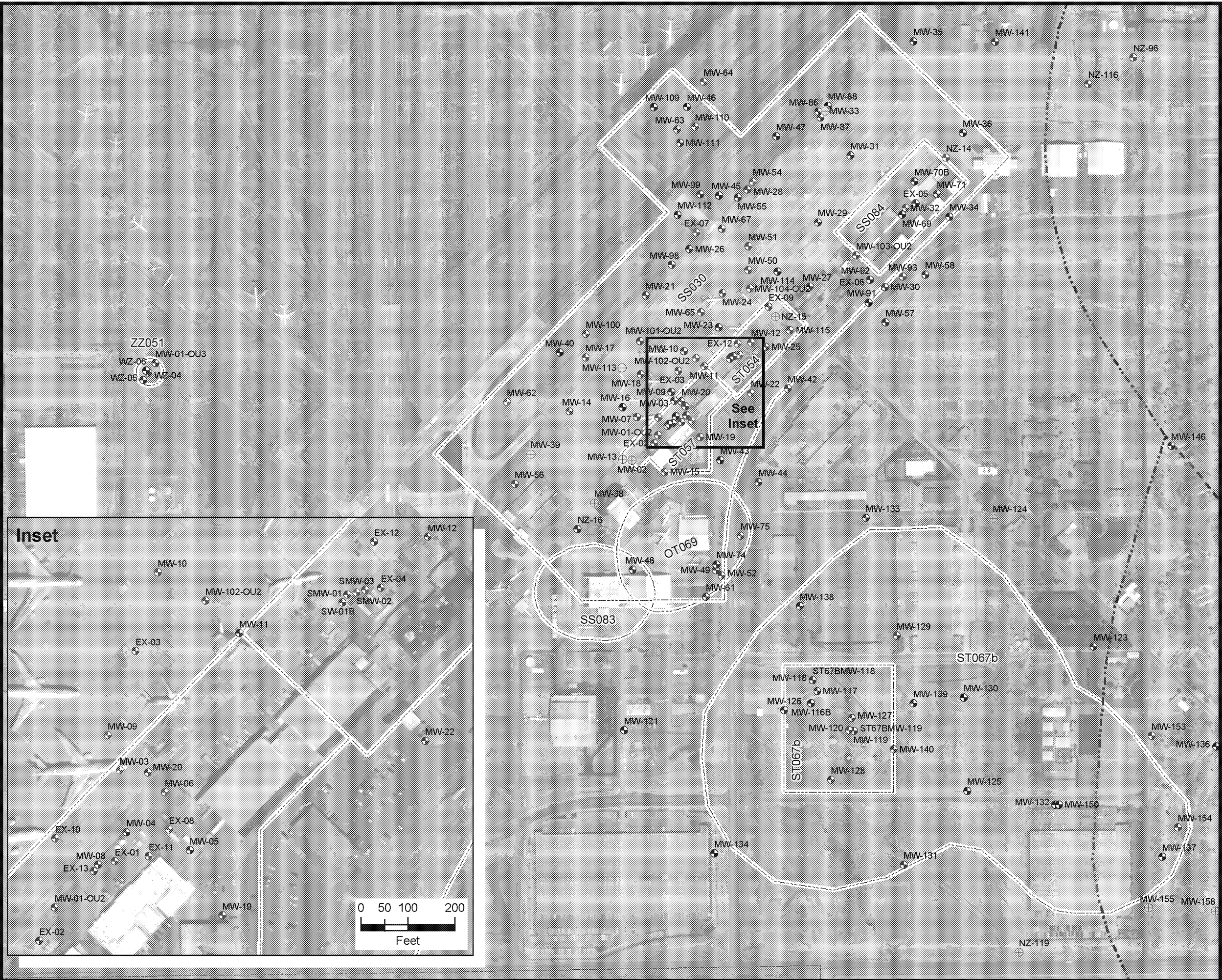


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FIGURE 3

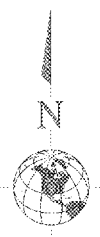
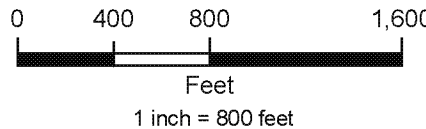
BASEWIDE GROUNDWATER MONITORING
LOWER AQUIFER WELL LOCATIONS
2018



LEGEND

- Proposed for Reduction
- Proposed Spring 2018
- Not Proposed for Sampling
- MLU/PLZ Boundary
- Modified MLU/PLZ (pre-2012)
- Site Boundary
- Enhanced Infiltration Areas
- Former George Air Force Base Boundary

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographic CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the User Community



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FIGURE 5

BASEWIDE GROUNDWATER MONITORING
UPPER AQUIFER WELL LOCATIONS
SPRING 2018 (DETAIL)



LEGEND

- ⊗ Proposed for Reduction
- ⊙ Proposed Spring 2018
- ⊖ Not Proposed for Sampling
- MLU/PLZ Boundary
- - - Modified MLU/PLZ (pre-2012)
- Site Boundary
- Enhanced Infiltration Areas
- Former George Air Force Base Boundary

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographic CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the User Community

0 1,000 2,000 4,000
Feet
1 inch = 2,000 feet

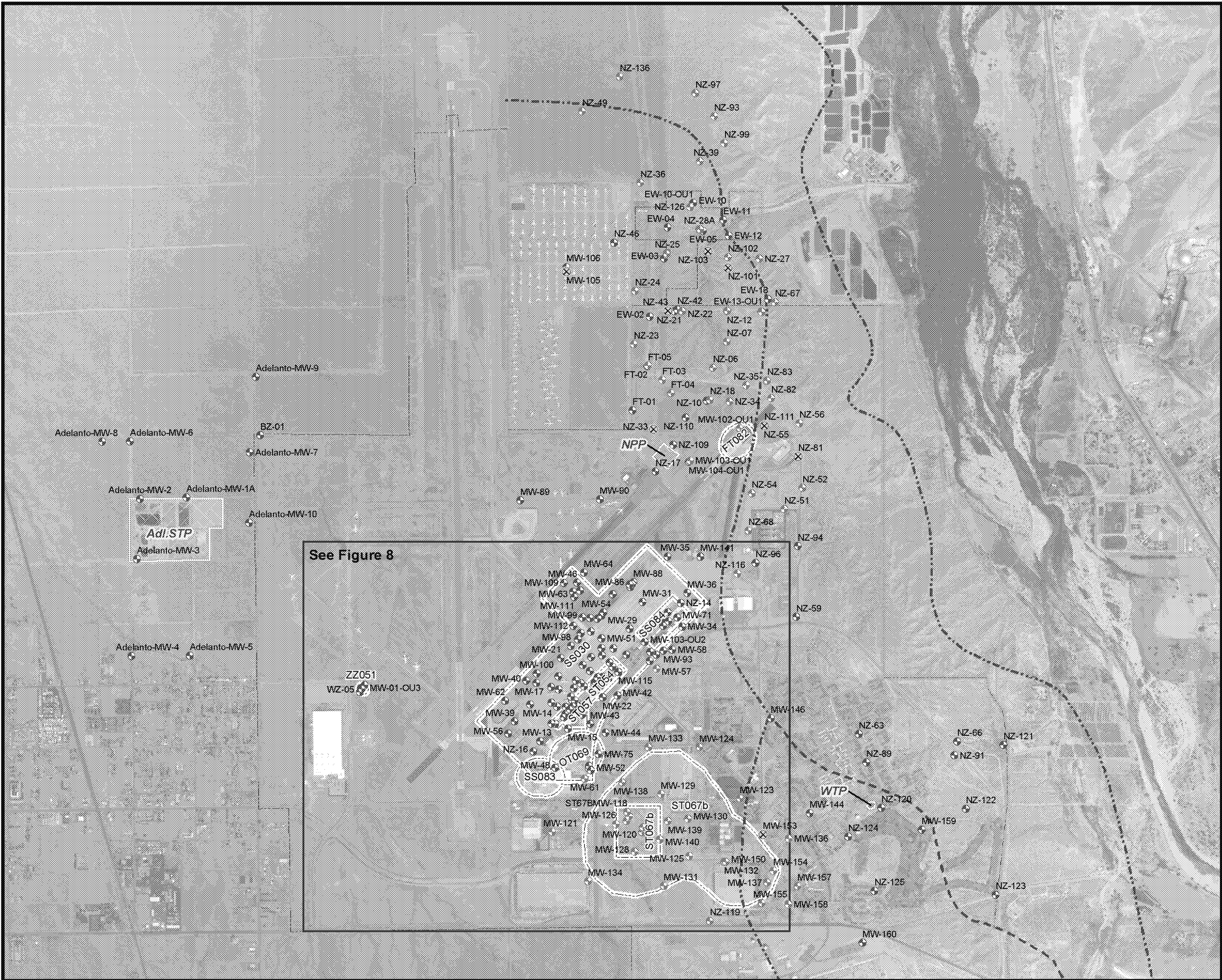
N

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FIGURE 6

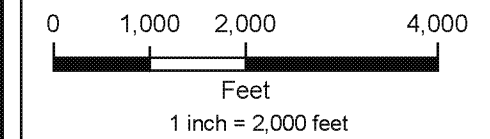
BASEWIDE GROUNDWATER MONITORING
LOWER AQUIFER WELL LOCATIONS
SPRING 2018



LEGEND

- ⊗ Proposed for Reduction
- ⊙ Proposed Fall 2018
- ⊖ Not Proposed for Sampling
- MLU/PLZ Boundary
- - - Modified MLU/PLZ (pre-2012)
- Site Boundary
- Enhanced Infiltration Areas
- Former George Air Force Base Boundary

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographic
CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the
User Community

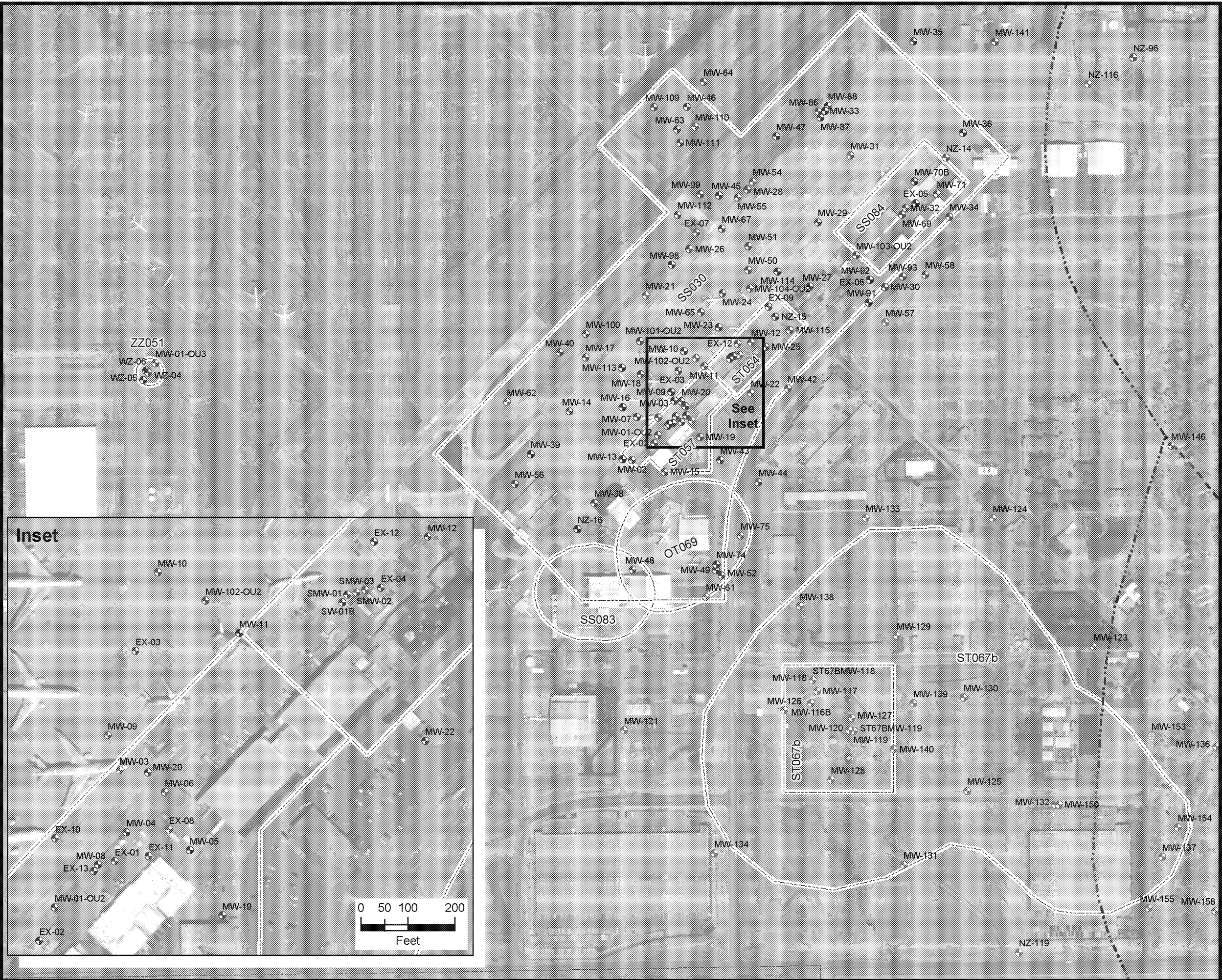


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FIGURE 7

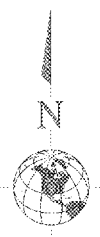
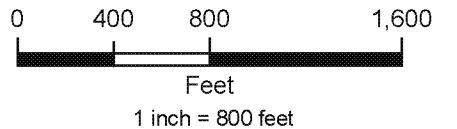
BASEWIDE GROUNDWATER MONITORING
UPPER AQUIFER WELL LOCATIONS
FALL 2018



LEGEND

- Proposed for Reduction
- Proposed Fall 2018
- Not Proposed for Sampling
- MLU/PLZ Boundary
- Modified MLU/PLZ (pre-2012)
- Site Boundary
- Enhanced Infiltration Areas
- Former George Air Force Base Boundary

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographic CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the User Community



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FIGURE 8

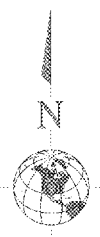
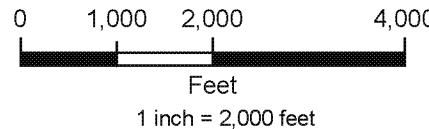
BASEWIDE GROUNDWATER MONITORING
UPPER AQUIFER WELL LOCATIONS
FALL 2018 (DETAIL)



LEGEND

- ⊗ Proposed for Reduction
- ⊙ Proposed Fall 2018
- ⊗ Not Proposed for Sampling
- MLU/PLZ Boundary
- - - Modified MLU/PLZ (pre-2012)
- Site Boundary
- Enhanced Infiltration Areas
- Former George Air Force Base Boundary

Source: Esri, DigitalGlobe, GeoEye, Earthstar Geographic
CNES/Airbus DS, USDA, USGS, AeroGRID, IGN, and the
User Community



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FORMER GEORGE AIR FORCE BASE
VICTORVILLE, CALIFORNIA

FIGURE 9

**BASEWIDE GROUNDWATER MONITORING
LOWER AQUIFER WELL LOCATIONS
FALL 2018**